THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., DECEMBER, 1862. No. 12.

PUBLISHED BY LUTHER TUCKER & SON
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-eight years. A NEW SERIES was commenced in 1853, and the nine volumes for 1853, 4, 5, 6, 7, 8, 9, 60 and 61 can be furnished, bound and post paid, at $1.00 each

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

The Cultivator & Country Gentleman.

COMPLEX MACHINERY.

In recently looking over the various implements and machines at the New York State Fair at Rochester, we were never more forcibly impressed with the truth that *simple machines are a success, and complex ones a failure*, other things being equal, or the machines having a fair share of merit otherwise. As always occurs on such occasions, a number of contrivances were exhibited, the ingenuity of which, the inventors seemed to think, depended on the curious arrangement of a great many parts. There was a water drawer, as an example, so complex, that it was quite a trade to learn how to manage it. There were several churns, encumbered with gearing, and some curious combinations of perpendicular and horizontal, and rotary and reciprocating motions; but while all of them would doubtless make good butter in good hands, if they did not churn it too rapidly, it is hardly probable that they would stand ten years of service and come out with so good a reputation as the old dasher churn or Kendall's simple barrel.

There are several conditions to the rule that simple machines are valuable, and complex ones failures. It may be laid down however, as nearly universal, that any machine requiring a hard strain or irregular severe work, *must* be simple. The plow is of this character. There is a constant pressure when it is at work, of several hundred pounds, and this pressure is constantly fluctuating, and sometimes very suddenly increased by a large stone. Nothing but a simple affair would stand this pounding and knocking, and jerking and relaxation of force. Convert the plow to a complex machine, and it would soon be bent or broken or deranged by such severe usage. This is the reason that Pratt's Ditching Machine proved a failure, although working well while every part remained unbent and uninjured. Rotary digging machines will probably share the same fate, for the same reason.

But there are some complex machines that succeed well—the locomotive on the railroad, for instance. But it must not be forgotten that the cost of making a single one, strong enough, is sufficient to buy a good two-hundred acre farm, in some of our best farming regions—and that a locomotive, instead of being subjected to the irregular and jerking obstructions that impede plows, glides over a road built expressly for its transit, and almost as smooth as glass. An occasional block of granite on the track or stick of timber, if repeated a few hundred times daily, would make short work of the best fifteen-thousand dollar engine.

The mowing and reaping machine is rather complex, but yet it will run for years—is not this an exception? No—for it must be observed that the obstruction which it has to encounter, is soft grass or straw, through which the keen edges of the blades run like a hot knife through butter—the process is totally different from that of the share of a plow finding its way among stones and hard soil. Besides, the mowing machine, although consisting of many parts, is simple in operating, consisting essentially of the vibrating motion of a single serrated knife.

Any locomotive plow, for these reasons, will be difficult in practice. A fixed locomotive, working long horizontal cables with plows, involves so much machinery, that it is doubtful whether it will ever be brought into long-tested, profitable practice.

A harrow and horse rake may not seem simple contrivances, because consisting of many parts; but they are both essentially quite so, for those different parts are firmly secured together so as to form one solid piece. A curry comb, and a hair brush, although having hundreds of teeth, are really but one part, in their use.

We often admire the simplicity of the crowbar and handspike—implements that will be in extensive and poular use, as long as human muscles exist, and labor is essential to human existence and comfort. The nearer, therefore, that every new invention approaches these admirable and time-honored contrivances, the more likely it will prove valuable, be widely adopted, and descend to posterity.

USE OF FISH MANURE.—At the recent State House discussion on manures, reported in the *N. E. Farmer*, several members spoke of the use of fish manure. Mr. Howes of Marshfield, said Daniel Webster spread fish upon his land, but it burnt up the soil and brought a prodigious lot of flies. Mr. Davis of Plymouth, said the remedy for this was composting—otherwise, on light soils, fish would burn up all the vegetation. Mr. Hood of Somerset, had used fish as a manure—the flies they drew only annoyed people out of doors; they never entered the house. The subject is one deserving more attention from sea-side farmers.

EXAMPLE IN AGRICULTURE.

"If men are to be made intelligent," says Henry Ward Beecher, "give them specimens of intelligence." And he illustrates this influence of example as follows:

Let a man go into a village where the houses are all going to decay, where the fences are all tumbling down, and where no pains are taken with trees and flowers, and build a neat house, and enclose his grounds with a good fence, and tastefully decorate his yard with comely trees and beautiful flowers, and his example will be a blessing to the place. It will not be three years before there will be twenty neat houses, with good fences, and yards decorated with trees and flowers, as the result of his judicious outlay of means. The taste of the whole village will be educated and improved by the influence that he will exert through the instrumentality of the advantages which he posresses over them.

We have observed the same thing in agriculture. When a thorough practical farmer goes into a neighborhood of "worn out" farms, and engages in the work of reclaiming and improving his new purchase, his success is sure to awaken a spirit of inquiry, and his example can but exert an improving influence upon all who witness or hear of it. He is seen to grow better crops than his neighbors on a soil which has been comparatively sterile heretofore, and the methods pursued are sought out by those around him. It is found that he does not grow crop after crop of wheat, corn or grass on the same field, but he grows good crops of these products upon different fields in a series of years, entering at once on a system of rotation. He introduces new and improved varieties of grains and seeds, the products of which are seen at a glance to be better than those commonly grown—at least they command a better price in market. The same is true of his orchard and garden. Better fruits and finer vegetables are introduced, such as at once attract the attention of the observer. The improved breeds of live stock with their better care and feeding, cannot fail to gain the notice of all around him. With improved plows and other implements of tillage he accomplishes a more thorough cultivation of the soil, giving a deep and mellow seed bed, insuring the crops against the excess of drouth or moisture, and bringing abundant crops despite "the season" so unreasonably complained of by the careless farmer. But as the real basis of improvement he is particularly careful in making and saving manure, seeking in every way to increase the fertility of his soil—to feed his crops, that they may produce large and profitable returns for his care and labor. An example of clean culture is also given, and it is seen how much more the soil can do for the farmer's crop if no self-sown intruding weeds are allowed to rob it of its proper sustenance.

These improvements, and many others we might particularize, as remarked before, exert an influence on the farms of those who witness or hear of them. Their owners may cavil for awhile, but the unmistakable signs of prosperity—of the paying nature of the new system of management—will generally influence the most incredulous into some sort of an imitation, which is nearly always followed by better returns, encouraging further progress—and thus the work goes on until the whole neighborhood shows the influence of the example. In this way, and by the constantly recurring lessons of an enlarged experience, a better system of culture has been in part introduced, and thus also diffused and extended.

Those who learn by hearsay, we remarked, are also influenced. The agricultural fair has its part in this teaching; but its great apostle is the newspaper, filled in large part by the writings of experienced and skillful farmers, who can not only tell how to work profitable results, but draw their illustrations from their own experience. Though no period in the history of agriculture has been without its examples of productive farming, at no period, on the broad acres tilled by American industry, have so many bright spots shown out to gladden the hearts and encourage the hands of the friends of improvement. As much room as there evidently is for advancement, a comparison of farming now with that of even ten years ago, shows marked progress. May it go on until *thorough work* shall make our land teem with golden harvests, with the finest flocks and herds in the world, with peace, plenty and universal liberty and intelligence.

(For the Country Gentleman and Cultivator.)

EARLY EXPERIENCE IN FARMING.

Messrs. Editors—I have several times thought I would give you an account of my first crop in the United States. I came on this farm the 31st day of October, 1821. The manure made in the cattle-yard had never been taken out of it, or any part of it, from the time the buildings were first erected. I immediately engaged a man with his horses and wagon to draw out manure at 8 cents per load, I helping to load. I gave ten acres a very heavy manuring. I then thought manure ought to be plowed under as soon as spread, and I hired another man, his team and plow, to do that job for one dollar per acre. Next spring I got a pair of good horses, pulverized the plowed land pretty well, and sowed barley, the year (1822) being about as dry a season as we have had since. My barley was nearly a complete failure.

One gentleman who had told me at the time I bought the land, that it was entirely worn out, and it was impossible that I could live on it, said, when he saw the crop of barley—"Did'nt I tell you so? This land will never pay tillage for any crop." Another, who had told me after I bought it, I should name the farm "Hard Scrabble," as I would have a hard scrabble if I made a living on it, when he saw the barley, said he thought it proved all he said of it. I felt no discouragement, however, as I well knew that owing to the dry season and the manure being plowed under, the barley derived no benefit from the manure. Had I left the manure on the surface through winter, and plowed in spring, I have no doubt the crop would have been much better; or if I had again plowed it in the spring, and turned up the manure so as to have mixed it with the soil by the harrows, it might have been still better.

After I took off what barley I could get—(it was so short I could not cut it all with the scythe)—I plowed it as shallow as I could, and harrowed thoroughly. When we got showers the barley vegetated. I then plowed as deep as it was plowed the November previous, turning the black rotted manure up, and sowed with wheat; and the crop was an excellent one—about as good as any I have since raised.

I also summer fallowed about eight acres, and sowed it with wheat; it also was a fair crop, but I could not afford to hire help enough to get manure on it, else it would have been as good as the other.

These were my two first crops—the one nearly a total failure; the other excellent.

People told me my land would not raise corn; so I planted little the two first years. But all that is required on this land to raise excellent corn, is dung and a thorough pulverizing of the soil before planting, and keeping it thoroughly pulverized as long as a horse and cultivator can go between the rows. That is the secret of raising corn here. My corn is very good this season, and I think generally so in this neighborhood; but all crops are good. I understand barley is turning out pretty well. Very little sown in Western New-York. I never raised much barley, but have raised more for a few years past. Oats

lodge so badly with me now that it makes them an expensive crop to harvest.

Peaches, pears, plums apricots, and grapes, have been a very abundant crop here, but the peaches on my farm were much later in ripening than usual—say from two to three weeks. We have had ripe grapes for some time.

Near Geneva. Oct. 2. JOHN JOHNSTON.

[For the Country Gentleman and Cultivator.]

Plowing Wet Grounds in the Fall.

As farmers cannot complete all their underdrains in one year, nor usually in ten years, there is a mode of plowing wet fields in autumn, which will improve very much the friability of the soil, and thus be the means of producing a much larger and better crop the next season, than when plowing is performed in the usual way.

The first consideration is to lay out the lands for plowing, up and down the slope, as nearly as may be. The slope is sometimes in a diagonal direction across the field, and sometimes a field does not all slope in one direction. But where the ground is decidedly wet, the lands should be up and down the slope, so that the middle furrows may carry off the surplus water more readily than they would were they made *across* the slope.

When wet land is plowed *across* the slope in late autumn, the surplus water will be retained in a great measure, by settling across the lands, from one middle furrow towards another, by which the soil will be kept well saturated, and sometimes completely flooded with water.

In case a field should slope gradually from two directions, and form a shallow valley, the true way would be to plow a land in the lowest part of the valley, and then let the middle furrows of all the lands, up and down the slope or slopes, empty into the main middle furrow.

Now that the work is laid out, the next step will be to execute it. If the ground is sod ground, the plowing should be performed—if it be done with a single plow—with lapped furrow-slices, and not with the furrow-slices laid flat. And more than this, the plowing should be done in narrow lands—not more than sixteen or eighteen feet in width. Then, after every land has been finished, adjust the plow for running as deep as the team can draw it, and cut the middle furrows six or eight inches deeper than the rest of the plowing.

After this has been done, let the middle furrows be shoveled out, so as to form a free channel for the water, and let the earth which is shoveled out, be spread evenly each way from the middle furrows, over the ridges.

One active man with a good round pointed shovel will shovel out a long line of such furrows in a day; and the good effect upon the crops next season where wet lands is treated in this manner, will amply remunerate for the labor bestowed. This kind of work can be performed when the weather is so unfavorable and cold that workmen can do little or nothing else to good advantage.

Manuring Meadows.

I believe that manuring grass land late in autumn is no longer a subject of doubtful expediency among our best farmers. Well conducted experiments have proved that it is far better to keep manure housed, and apply it, as a top-dressing, late in autumn to grass land, than to apply it in the spring of the year, even if well rotted. Coarse barnyard manure applied as a top-dressing to grass land in the spring will not increase the crop half as much as the same manure would increase it, where it spread evenly over the surface in the fall.

The true philosophy of this matter is here. In autumn everything tends downward into the earth. Grass, stubble, leaves, and all such substances, return back to the soil. The temperature of the weather grows cooler and cooler almost every day; and the various grasses in the soil do not rise to promote vegetation as they do in the spring of the year. Therefore when manure is applied in late autumn almost the entire strength of the manure is carried down into the soil, and there retained as food for plants until the next spring, when new life of plants begins, and long and warm days increase the temperature of the soil; and thus those manurial substances—gases and salts—which promote the growth of plants, are brought up to the surface of the soil, and taken up by the roots of whatever is allowed to grow upon the soil.

But when manure is spread on the surface of the soil in the spring of the year, only a small proportion of the salts and grasses of the manure ever enter the soil; but they are swept away upon every breeze, and almost wholly lost in their efficacy on the crops of him who claims those substances as his own.

I have observed for many years past that they who spread their manure on the surface in the spring of the year, promote the growth of their neighbors' grass about as much as they do their own; while, on the contrary, those farmers who spread their manure in the fall, or in November, derive all the benefit that the manure can impart in heavier and better crops the next season.

A thin sprinkling of the scrapings of the barnyard and sheds applied in November to grass land will often increase the crop to more than twice the usual amount. This I have often tested, and have never known it to fail.

On the contrary I have never been able to perceive but little benefit from manuring grass land in the spring. I have my mind on the meadow of a neighbor who gave one of his meadows a heavy dressing of good manure last April, and I watched it until the grass was mowed, and I am compelled to acknowledge that I could perceive little or no benefit at all arising from the top-dressing. The grass was very light, and yielded, as I judged, not more than one and a half tons of hay per acre. Had that quantity of manure been applied in autumn, no doubt the grass would have yielded more than three tons of hay per acre.

Auburn, N. Y. S. EDWARDS TODD.

[For the Country Gentleman and Cultivator.]

NOTES FROM LEVI BARTLETT.

The Vetch or Tare.

Mr. Cornell, in his letter published in Co. Gent. of Sept. 18th, has something to say of the vetch, a plant much grown in England for soiling, and to be fed off by sheep preparatory to the wheat crop. I have read much in the English agricultural papers about the culture and use of the vetch or tare, but have never seen the plant till this season. Last spring I received a small package of seed from the Patent Office, marked "large seeded vetch from France." The seeds were black, in size and form about like a middle sized pea. The seeds were sown in drills, came up, and made a fine growth. They are a straggling, pea-like plant, growing to the length of four or five feet; the stems are stiffer and much stouter than the largest kind of peas. The seed has ripened well. Judging from this French specimen of the vetch, I think it a plant that might profitably precede the wheat crop, especially if fed off by cattle or sheep in July and August. Also a good soiling plant. Mr. C., in speaking of the rape plant says: "The top of the rape resembles the top of the Swede turnip—the root that of the radish." I have grown the rape several years, and from seed derived from different sources, none of which had roots like a radish, but all had very large, strong and long roots, like the cabbage. Mr. C. is right about the plant not surviving our winters.

The White and the Yellow Lupin.

I have grown both of the above named Lupins. The seeds of the white variety were obtained from the land of the Pyramids. On good soil they grow to the height of four or more feet, with a stiff, woody stem, half an inch in diameter, with a branchy top, producing clusters of pods. The yellow lupin does not grow so tall, and throws out numerous branches from the base of the main stalk. It is a much more bushy, leafy plant than the white. It is the yellow lupin that is so extensively grown in many portions of Germany for green manuring. From the limited knowledge I have of the two kinds, I should give the yel

low one the preference. The summer season is not quite long enough to perfectly mature the seeds of the lupin here in New-Hampshire. The time may come when it will be profitable to extensively grow the lupin, as in Germany, for the purpose of enriching our light sandy lands.

The English Bean.

When Mr. Webster returned from his visit to England, more than twenty years ago, he procured a large variety of Agricultural seeds for distribution. They were left at the seed store of Joseph Breck, Esq., Boston, for distribution. Among other seeds Mr. B. forwarded to me, was one quart each of four varieties of English beans. These were planted in drills. A portion of the land was dry, gravelly soil; the other part a moist, stiff, black soil. The plants on the dry portion of the field were nearly a failure, while on the wetter portion they grew well, but I came to the conclusion they were far less profitable than our native beans, so did not repeat the experiment. I have occasionally received a package of the English bean from the Patent Office, but they do not succeed well here. This season I planted a few drills of two varieties, viz.: The White Flowering Marsh and Seville Long pod beans. But very few of the pods on either sort have ripened, and if they do all ripen, they will not yield so largely as many of our large colored kinds do. Many of the plants were for weeks as lousy as some of the secession soldiers were that fell into the hands of our troops. And here I will just hint to Mr. NEWTON of the Ag. Bureau at Washington, not to purchase any of the English beans to send North—they won't pay. Neither the beans or the fodder are as valuable as are those (and their like) that were grown here by the Indians, long before the discovery of the country by Columbus.

Potatoes.

They are rotting somewhat badly among us—more so I think, than for several years past. LEVI BARTLETT.

Warner, N. H., Sept. 30.

[For the Country Gentleman and Cultivator.]

COW MILKER.

L. TUCKER & SON—Observing an inquiry in the number of the Co. GENT. for October 16, from a correspondent at Deerfield, Mass., about the patent cow milker, I reply that as agent for the manufacturers I have been selling these cow milkers occasionally, during the past season, and expect to have the "*improved machines*" which received a premium, and attracted so much attention at the late International exhibition, for sale in good season for the early spring trade.

It was only a short time before the patentee left this country to attend the exhibition, that he perfected the "cow milker" so as to be able to recommend it with entire confidence.

He took with him one hundred machines, which after a most thorough trial in the best cheese and dairy districts of England, proved an entire success. The patent was sold, (the United States only being reserved,) for $25,000 cash, with a royalty of $5.00 on each machine to be made and sold.

Between four and five thousand were disposed of before one of the partners left, the other one remaining a short time to superintend for the purchaser of the patent the manufacture of 10,000 milkers.

This patent cow milker, rather ridiculed at first, with the iuquiry "what is coming next?" having passed the ordeal and close practical examination and trial of thousands of farmers in the best dairy districts of Engiand, may be now considered a fixed "American institution."

It consists of a simple but fixed attachment on the side of the regular milk bucket, the India rubber valves of which, operating by simple suction, are worked by a couple of levers with the two hands, till the last drop of milk is drawn from the udder. The teats are inserted in India rubber tubes or cups, which are adjustable, to suit different udders. It is contended that the milk is drawn out more thoroughly than it possibly can be by hand, and also with more ease to the cow, and in a shorter time.

There has been cases where unruly cows, who would not stand to be milked by hand, quietly submit to this last scientific process, which puzzles them a little at first, but before recovering from their surprise their milk is all drawn into the bucket.

It is well known that many fine cows are ruined by bad milking, and the extreme difficulty of procuring good milkers is felt by every dairyman. This invention, therefore supplies what every farmer wants, and it is the intention to have them manufactured on a large scale, so as to supply every section of the country. PASCHALL MORRIS.

Philadelphia.

[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES---No. 4.

In recapitulating, it will be observed that the five June colonies have sent out but two swarms in the three seasons That is equal to but one swarm from six colonies.

From the six July colonies, but one swarm has issued in three years; being one swarm from thirteen colonies. I think had those hives been supplied with boxes at the commencement of the season, they would not have sent forth swarms. They had been at work some time before boxes were supplied. From these facts inferences may be drawn of the probabilities of swarming, if supplied in season with a full suit of boxes, by others as well as myself. These facts should, however, be considered in coming to a conclusion. The July swarms commenced the season weak, from causes named in a previous communication, (p. 223,) and one, beside the hive swarming, gave no surplus honey. But all have filled their hives with comb, and I think have sufficient winter stores. But I purpose to ascertain by weighing them, and if either appear to be short, to supply the lack.

As previously noticed, the June swarms have done the best, they having each given, on averaging, 37 pounds of honey each season, while the average from the July swarms has been but 20 pounds each season. But I can see no reason now, why for another season they do not promise as well as the June swarms.

Most of the honey being from white clover, has readily sold for 25 cents per pound; which is $9.25 for each June swarm each season, and $5 each season for each July swarm; or, at 20 cents per pound, $7.40 for the June and $4 for the July swarms. The average of both June and July swarms each year, at 27 1-5th pounds, at 25 cents, nearly $7. Aggregate of the eleven swarms 705 pounds, at 25 cents per pound $176.25.

I know no reason why eleven new swarms, in any section equal to this for bee-pasture, should not do as well, with the same hives and treatment. Twenty-five new swarms issuing from the 18th to the 28th of June, should give 925 pounds, worth at 25 cents, $231.25.

The care taken of my bees has only been the common care that farmers usually take of their bees. To hive them and set them in their places with the boxes on in the order desired, and occasionally as curiosity prompted, my own or that of others, to take a look within by removing the back door and see how they were progressing, both in the principal hive and in the boxes. This visit will be somewhat frequent where you can see the whole progress of the work, and see that they are progressing finely, and that without in the least disturbing the bees in their labor.

Some object to glass covering the front and rear of the principal apartment. That may be omitted if desirable, and the principal hive be enclosed with firm boards—still centrally divisible, and all the advantages secured, except the inspection of the principal apartment. I think no one making the trial I have in the experiments made, would fail to make the improvement, and the trifling expense would be covered at once. I would again invite friends desirous to examine the claimed improvements, to call at 168 Third-street, Albany, or on the Delaware Turnpike, three-fourths of a mile from Lydius-street. JASPER HAZEN.

RYE CONVERTED TO CHESS.

I have been an attentive reader of the articles in your paper, in reference to wheat and rye turning to chess. I will state a fact: In July, 1861, desiring to try an experiment of sowing rye with buckwheat, which I have seen do well and be remunerative, I sowed about four acres with rye and buckwheat. My crop of buckwheat was gathered and yielded well. The rye crop, in about two weeks after, looked well and promised fair.

In September I sowed another lot of six acres with rye, the same seed.

Last spring in looking at the rye upon the buckwheat stubble, it presented a strange appearance, and at the proper season a better crop of *chess in head*, no farmer need have desired. Three-fourths of the field was chess. This was cut green,—fed to the cows, and was eaten with avidity.

The rye sown in September, was reaped and gathered in season, and was free from chess.

Another fact under my observation: It is a custom with our farmers to soak their seed wheat in strong brine—the shrivelled, small and blasted grains, together with foul seed, chess, cockle, &c., float, and are skimmed off.

A neighbor of mine, preparing to sow wheat, in which was a good deal of shrunken grains, but otherwise clean, soaked it in brine, and the shrunken wheat was skimmed off. Finding that he did not have quite seed enough to finish his lot—there being a small angle in a corner, unsown—he sowed this shrunken and shrivelled wheat, and the next year his wheat crop, except this angle, was free from chess, and his corner of shrivelled wheat was a chess crop, free from wheat. C. *Morristown, N. J.*

We give place to this communication, merely to explain how easily all weeds find their way into cultivated crops. A weed is any plant that has small seeds that become mixed with the seed of crops, or otherwise spread in the soil, and that are extremely hardy and spread under adverse circumstances. Out of many thousand native and introduced plants, a very few have become excessively troublesome as weeds, and chess is among the number. The soil may contain millions of minute seed all through it, without constituting a ten-thousandth part of its bulk, and wholly imperceptible on close examination, remaining dormant, as all seeds do, when buried too deep, but springing into vegetation when brought near the surface. Luxuriant crops often keep such weeds smothered down, till some accident occurs to kill the crop, when the weeds spread upward and take the space thus given to them. Hence superficial observers and hasty reasoners think that the plants of the disappeared crop have *actually turned into the weeds!*

The seeds of the chess plant require a million to a bushel,—and ten thousand, or one hundredth of a bushel, would seed an acre, one plant to every two feet square,—as we have often seen them cover a square yard when they had plenty of room to grow in. These ten thousand seed would constitute but a two-millionth part of the soil, and would never be detected till growing. The seeds are also very hardy, and may be scattered in manure, and many other ways. They will grow and bear a few seed when less than six inches high, under a dense growth of wheat and rye, but when any thing happens to kill the crop, these little plants spring up and spread in wild luxuriance. Knowing these characteristics, any one could have known *by reasoning beforehand*, that cases would continually occur among careless farmers, where they would think their crops had changed to the weed—or to any other weed that would alike take its place. Such cases are accordingly occurring daily—they are reported to us very often; and we have no doubt that there are at least a thousand of our readers, and perhaps many thousands, who have often heard just such statements as the one here given by our correspondent. Keeping in view the character of the chess weed, and its readiness to usurp the place of an injured and destroyed crop, there will not be the slightest difficulty in accounting in several different ways, for its abundant appearance, whenever poor, shrivelled or worthless seed is sown; or having started, has been destroyed in any way. It is needless to spend time and space upon the subject, and we are surprised that after it has been so repeatedly and satisfactorily explained, just such cases as we have heard at least one thousand times, should be so often repeated.

PRAIRIE SCREENS AND HEDGES.

M. L. Dunlap, of the Chicago Tribune, states that he has seen a perfect prairie fence or hedge made of the white willow, (called also grey willow,) the cuttings of which were put out in 1853. The cuttings were placed one foot apart, the soil dry and rich, just above overflowed flats. The trees are now forty feet high, and are sufficiently close to exclude all horned stock and horses, and only to allow the passage of small pigs, lambs and calves. The trees are six inches in diameter—form a fine screen against winds, and are estimated to "produce nearly or quite a cord of wood to the rod." After the cuttings were set out, they received horse cultivation, but we are not informed for how many years. To stick them out and neglect them, or allow cattle access to the trees while they are young, would be entirely useless, and would of course end in failure. F. K. Phoenix, (who has an especial abhorrence of all humbugs,) in a late Prairie Farmer, expresses his entire confidence in this tree for screens and hedges for prairies, provided it is rightly treated, namely, 1st, by preparing the ground in the best order; 2d, by obtaining a *good stand;* and 3d, by keeping the cattle away from it for several years, as they will browse it.

The willow here spoken of is the species so well known in Europe and extensively grown for timber, known to botanists as the *Salix alba.* In a letter received last year from Charles Downing, he says, "The best willow for timber, hoop poles, &c., is what Dr. Grant calls the "Beveridge willow," (the proper name I do not know,) but the *purpurea* is best for hedges—cattle are not so apt to eat it, and it may be so woven together as to be almost impassable." The extreme bitterness of the bark and leaves of the Salix purpurea prevent cattle from touching it; and the very tough and flexible shoots may be interlaced in any desirable manner. Loudon says that in Norfolk, Suffolk, and in some parts of Essex, England, it is used for plaiting into low close fences, for the exclusion of hares and rabbits, which will not touch the shoots, and that a fence of this kind is reckoned but little inferior to that of wire." The Beveridge willow, of which we have trees growing from cuttings received of Charles Downing, if not the old *Salix caprea*, is certainly very nearly allied to it, and perhaps merely a variety,—although, in a genus containing over two hundred species and some of these running into many varieties, it is hard to speak with confidence.

These remarks are made, not for the purpose of positively recommending any of these willows for hedges, but for the encouragement of experiments which may lead to something valuable. While the entire fences of the

northern states cannot be a dollar less than five hundred millions, it is well worth while to give some attention to all the possible ways in which the expense may be lessened, and farm barriers made more secure.

EXTENSIVE ORCHARDS IN CALIFORNIA.

Some of our readers may remember the account of the magnificent orchards of G. G. Briggs of Maysville, California, published in a former number of the Illustrated Annual Register—$22,000 worth of peaches were sold in 1857—and 67 peaches weighed 65 lbs. A late number of the California Farmer states, that notwithstanding the disasters occasioned by the flood, which swept away thousands of trees, the crop of Briggs and Haskell this year will exceed any former crop. Seventy men are employed in gathering, yet thousands of bushels will be lost. In the second week of August, from sixteen to twenty tons a day were sent from these orchards, in peaches, apricots, and plums; two-thirds being shipped to Sacramento and San Francisco. Even nectarine trees were breaking down, and the ground was covered with excellent fruit. It appears that where the wash of the flood was only sand, piling it up two to four feet about the trunks did not injure the trees, but rather served as a useful mulching. But where the deposit was soft clay, the trees were killed. This result was to be expected, the former admitting air and ready drying—the latter excluding air, and causing decay.

[For the Country Gentleman and Cultivator.]

CATTLE HERDING ON THE PRAIRIES.

[We transcribe from a private letter the following interesting account of the system of a noted stock feeder of Lee Co., Ill., believing it will prove of interest to the readers of the Co. GENT. The same method is in use in other sections of the West, and is perhaps one of the most economical plans of consuming the products of a farm so as to bring them into transportable shape for distant markets, which can be employed in that section under present circumstances. We are promised further particulars as to the summer care of the cattle herd, from information gathered on a visit to their prairie "ranges" or pastures.—B.]

Within a few years a system of cattle-growing has been practiced in this country, which to some extent changes the characteristics of prairie farming. The vacant lands are now so generally enclosed that the pasture "range" has become too narrow for the stock of the farmer, and this has led the owners of large herds to establish "ranchos" or herding stations on the borders of Inlet and Winnebago marshes, to which are gathered in spring must of the beef and young cattle of this section for pasturage during the grazing season. In October they are returned to their owners, who pay about $1 per head for salting and attendance, thus getting a summer's growth at but slight expense compared with home feeding, the animals thriving equally as well. The farmers following this system are generally such as own from eighty to one hundred and sixty acres of land, from one-half to two-thirds kept under cultivation, in corn, wheat, timothy seed, and the lesser crops.

We cannot give a better idea of this system than by some account of the farm and management of IRA BREWER, Esq., of Bradford. He has about 240 acres of land, nearly one hundred of which are in timothy, which he cuts as early as it is fit for seed, carefully saving the straw as well as that of his large crops of wheat and oats in stacks for winter forage. His cornfield also furnishes a large amount of fodder.

He buys of his neighbors as he can, their one, two, and three year olds, which are kept with the herd in summer as before stated. In October, when the prairie grass is all dead, his timothy is excellent pasture, and here his stock is kept until snow falls, when they range the corn fields or feed at the straw stacks as they choose. At the proper age, Mr. Brewer fattens his cattle for the Chicago market, feeding them liberally with corn in the ear. About sixty hogs follow the cattle to use up all the shelled corn and that voided whole. It is found that hogs do better in this way than if fed good corn in the ear—fattening more rapidly and economically.

This system has its advantages in allowing the profitable home consumption of all the fodder as well as the coarse grains of the farm; in enabling the farmer to keep all the stock the farm will winter at but slight expense per head; and in the large amount of manure thus furnished for keeping the soil in a highly productive state. The expense of marketing the products is far less than in the form of grain, and the prices are generally fully as remunerative.

W. H. GARDNER.

Amboy, Ill., Oct. 8, 1862.

[For the Country Gentleman and Cultivator.]

Winter Treatment of Breeding Ewes.

MESSRS. EDITORS—In THE CULTIVATOR for Nov., page 353, I find an interesting statement by GEO. BACHELDER, on the management of breeding ewes during the winter months, in which I most heartily agree, except in the following points: First, Mr. B. says, by all means remove the manure from the sheep-sheds as often as there is a thaw in the winter, as the ammonia from the sheep manure is injurious to them, and although the disease may not appear in the ewes, it will count on the lambs. Now, Messrs. Editors, this is truly a new idea to me, (throwing out sheep manure in the winter,) as I have always supposed that sheep manure must be let alone until wanted for use in spring, as when forked from its bed into heaps it would heat and burn, and thus destroy the most valuable elements of the manure; and as for ammonia arising from the manure to the injury of the sheep, I believe it can be prevented in a cheaper and much better way than the removing of the manure.

I have adopted the following mode of management: Before my sheep come into the barn, I draw a layer of muck, say six or eight inches deep, into my sheep-pens, and this, with a frequent addition of a little straw, soaks up the liquid excretions of the sheep for the first few weeks of winter. I then draw in a layer of sand or dry muck, or both, and this process repeated two or three times during the winter, retains all the ammonia; and I find on entering my sheep-barn on a warm day in winter, the air is purer than when I used nothing but straw, unless I used a great quantity of straw, which is injurious to the manure. The frequent bedding with sand or muck also renders the manure much easier to fork up in the spring—it also will pulverize up much finer, which is very important in the production of crops.

In the second place, I cannot agree with friend Bachelder in the use of oil-meal. Although my experience is limited, I had honestly come to the conclusion that flax seed or cotton seed oil-meal, fed with other grain in part, was the best feed I ever used, not only for fattening but for producing an increased flow of milk, which is quite essential in raising lambs. Last winter I fed cotton seed oil-meal to all of my breeding ewes, with turnips twice a day, in morning and at night—fed but very little other grain, and I must say that my ewes never did better, having an abundance of milk and raising nearly all of their lambs, although they come in February and March, the coldest part of winter—sixty ewes raising about sixty-six lambs—all but 12 of the ewes fine wool—the coarse ones producing twins nearly all of them. I also believe it will increase the growth of wool at least ten per cent.

over other grain, as my flock sheared this year nearly half a-pound per sheep more than last year. This I attribute to the cotton seed oil-meal.

It is also considered that the manure made from sheep or cattle fed on cotton seed oil-meal is much more valuable than the manure made from stock fed on other grain. If this be true, it is certainly an important item to look after, as the manure is the life of the farm; without it the farmer may truly say that farming is poor business, or does not pay six per cent. on the money invested.

In regard to sheep running in open sheds—allowing them to run out of doors at will, was, as I supposed, fast being done away with—at least in this part of the country, where the cold blasting storms of winter find their way into our sheds unless shut up on all sides, and double boarded at that. I believe that sheep will, when kept in-doors with a plenty of ventilation, penned off, as friend Bachelder says, in pens of 25 to 50, each, (according to grade,) cut more wool, raise more lambs, and keep in better condition on less feed than when exposed to the cold blustering storms of New-England.

What I have said that does not agree with friend Bachelder's theory in sheep culture, I hope will be taken in good part, as I am somewhat interested in the culture of sheep, and am always anxious to learn from those who have had more experience than myself in sheep husbandry.

Hatfield, Mass., Oct. 25, 1862. J. E. WIGHT.

[For the Country Gentleman and Cultivator.]

Remedy for Foul in the Feet.

MESSRS. EDITORS—In a recent number of the COUNTRY GENTLEMAN I noticed directions for curing foul feet in cattle. As I have often cured it by a much more simple and easy process, you may publish my method, if you please:

Dissolve blue vitriol in water to saturation, and daily wet the parts affected. Three or four days will give ample time to effect a cure, provided the feet are kept *clean and dry*, except from the application of the vitriol water.

It is a painful disease, and unless cured speedily, will cause a rapid waste of flesh. E. MARKS. *Camillus.*

THE ADIRONDAC GRAPE.

Mr. A. S. FULLER, a well-known horticulturist of Brooklyn, has been to Essex county for the purpose of examining the original Adirondac vine. He reports as follows:

"I went to Plattsburgh, but there learned that the original Adirondac vine was in the grounds of J. G. Witherbee, Esq., at Port Henry, in the town of Moriah, Essex county, about 40 miles north of Whitehall, in latitude 44°. (Mr. W. not being a propagator of fruits, and not attaching much importance to the matter, sometime since agreed to furnish Mr. Bailey of Plattsburgh with all the cuttings, except what he gave to his friends.) The original vine stands about 10 rods up the slope, and about 50 feet above the waters of Lake Champlain. The hills, at the base of which the vine grows, are some 200 feet high, and sheltered on all sides as well as it could be protected naturally, and the valley opening only to the south.

"The soil is a deep sandy loam, intermingled with the disintegrated rock continually washing down from the hills above. Mr. Witherbee says he first noticed the vine in 1852, and, supposing it to be a wilding, or an Isabella, dug it up as he supposed; but the next season a sprout from the old root, or a seedling, came up in the same place, and this was allowed to grow. The following winter it killed to the ground, but the next season it made such a fine growth that he protected it at the approach of winter. The following season it produced fruit which ripened some weeks before the Isabella standing in the same garden. This vine has been laid down and covered every winter since, and has never failed to produce a good crop. The vine at the present time has three shoots from the ground, each of which is about 1½ inches in diameter. They cover a trellis some twelve feet high, and sixteen feet long.

"The vine cannot be said to be trained, although a part of the branches have been tied to the trellis. The leaves are now (Oct. 6) perfectly healthy, there having been no frost to kill them, neither have they been attacked by mildew. The Isabella and several other varieties in the same garden are also perfectly healthy and growing rapidly. The Isabellas are not yet ripe. The vine has every appearance of being an Isabella, both in leaf and wood, with perhaps the exception of the *alæ* of the leaf overlapping more in the Adirondac than in the Isabella. The points of difference are: The earliness of ripening, and the larger size of the bunches and berries, and the lighter color of the fruit. The clusters are more compact, and the berry is nearly round, while the Isabella is oblong. The quality of the fruit is very good, but not rich; pulp very tender, parting readily from the seed. I consider it a great acquisition."

[For the Cultivator and Country Gentleman.]

THE FRENCH PRUNE.

MESSRS. LUTHER TUCKER & SON—Mr. LEVI BARTLETT'S paragraph in the Co. GENT. of Oct. 23, in regard to French Prunes, prompts me to say that this delicious fruit grows even in New-Jersey. Among a lot of several hundred choice apple, pear, cherry and apricot trees, which I received in 1853 from Germany, out of the nursery of the Prince of Schaumburg Lippe, I found a dozen prune trees. Having been dug in the middle of November that year, and shipped by a sail vessel, they arrived here when the ground was frozen, and I had to dig a trench for the whole lot, and covered them thick enough with earth to keep the roots from being exposed to the frost. When the ground was settled in March, 1854, they were all planted, and succeeded so well that the loss out of apple, pear, cherry and prune trees did not exceed 10 per cent. My apricots I lost nearly all. Of these dozen of prune trees I saved eleven, about as handsome as can be desired. While all my plum trees are killed with the black knot, which even extends to an alarming degree to the native sour cherries, my imported German cherries show very little of this plague, and not an insect seems to touch my prune trees. Even the locust, so hurtful to my apple and pear orchards, never touched a prune tree. These trees have borne every year since the second of their being planted, and for the last three years more than the supply for my house. This year some of them were almost loaded down with delicious fruit, but showed signs of some rot, caused, as it seemed to me, by the bees eating holes into them before maturity, during the long dry and hot weather. However the daily supply was abundant for a month, and the last picking yielded a bushel of very sound and sweet fruit, a good share of which were used for sweetmeats. Prune trees can stand good manuring; they will survive alongside of a hog-pen or barnyard. However, I think they grow slower in this climate than they would in a more northern or moister region. Their young growth does not winter-kill like peach and other tender fruit trees, and they are long lived. In an orchard on my father's farm in Germany are prune trees now bearing, which were planted by my grandfather over sixty years ago. The prunes were dried in ovens for family or market use. I fully agree with Mr. Bartlett, regarding the quality of this fruit, and would advise every man who can spare the room, to plant at least trees enough for his own use. They can be grafted or budded on plum stock, but I believe stocks raised from the prune pit and budded, are to be preferred on account of their greater hardiness. When the season for budding arrives I shall be happy to supply some brother farmers with a few buds or grafts, if they will inform me how to *cut*, *pack* and *direct* them.

South Amboy, N. J., Oct. 27, 1862. JOHN F. HILLMANN.

[For the Country Gentleman and Cultivator.]

THE VETCH OR TARE, etc.

Messrs. Editors—I notice the remarks in your paper on the cultivation of the English Vetch in this country. Twenty odd years ago, when farming it in Buffalo, on the Niagara river, I experimented with the vetch, as well as many other English products. The summer climate there is nearer that of England than any other I have experienced in the United States; but after repeated culture I gave up the vetch, as being less profitable than clover for pasture or soiling, and the pea for a grain crop. The vetch requires a cool and *very moist* summer, and the *open early spring* of England to grow it to perfection and profit. An early spring and wet summer, and a rich, moist clay or loam soil, might produce a profitable crop here; but a late, dry, hot spring and summer I fear would not—at least my experience proved this.

The best and earliest pastures are winter wheat and rye. By the time these are fed off, orchard grass, clover and ray grass are sufficiently forward for a good bite. Before these are over, early sweet corn will be fit for roasting ears, which is the best and most profitable stage in its growth for soiling; and from this on through the season you can have corn, by planting or sowing it at different periods, and of later or earlier varieties.

The sweet early corn has not so great a growth as many other kinds, but it is enough more nutritious to more than make up the difference of weight and product per acre. Many grow the large southern varieties, because they get a *greater growth of stalk;* but the stalks are so coarse, and so destitute of flavor, that cattle will only eat a part of them; and moreover, you cannot get this variety forward soon enough in our high latitudes to produce even roasting ears, to say nothing of those fully ripe. In fact, it is something like secession, it does not flourish well at the north, though northern early corn like Unionism, produces fine crops at the south.

I have experimented fully with English beans, and came to the same conclusion Mr. Bartlett has on this subject—our own varieties are much superior for the table, and greatly more profitable.

I have experimented also with lucern, and pretty much all these British, French and German products, which are little known, and less grown, among us, and have come to the same opinion which our ancestors probably did who emigrated to this country, and that is, we have superior and more profitable products, which the good sense and experience of our farmers have long settled upon as best for us. Still I am always ready for new experiments, for if one succeeds out of a thousand, the country may be made a great gainer thereby. Sorghum, for example, especially at the West, has proved of great benefit. We find, also, that cotton this season is grown profitably in a higher latitude than it was supposed it could be. I had a beautiful growth of it in my garden nine years ago; even the Sea Island produced blossoms, and it is well worth cultivating as a *rare flower* in our gardens. A. B. Allen.

New-York, Oct. 31.

[For the Country Gentleman and Cultivator.]

SETTING PEACH TREES.

I put out two peach orchards last spring, setting both with great care. One I mulched, and sowed to spring wheat; the other, I planted with beans, using a cultivator freely, and hoed the trees three times, thus keeping the soil perfectly mellow, using no manure around them. The result is, three times the growth upon those cultivated; the shoots being green and thrifty. While in the other orchard, besides the growth being small, the leaves are yellow, and altogether does not present near as fine an appearance as the other. Both orchards were set on precisely the same quality of soil, and the difference in growth can be attributed to no other cause than that of cultivation. I think there is no other tree that shows a lack of cultivation sooner than the peach. E. A. King.

King's Ferry, Cayuga Co.

ABOUT CORNED BEEF.

When beef is fresh it contains considerable blood, which is drawn out by the brine. If the meat is left in this bloody mixture, it will require a much larger quantity of salt to preserve it, particularly through warm weather. My plan is to make a brine by using for every hundred pounds of beef, five pounds of salt, one-fourth of an ounce of saltpeter, and one pound of brown sugar. This is dissolved in just enough water to cover the meat, and poured upon it. When it has been in this brine two weeks, I take out the meat, let it drain, pour a fresh brine over it, and then it will be good the season through.

The cook who uses corned beef should not be so ignorant or so indolent as to delay putting it over the fire until an hour before dinner. A good sized piece requires three or four hours steady boiling to do it justice. Insufficient boiling must be made up by extra chewing. Always have the water boiling when the meat is dropped in, otherwise the sweetness will be drawn out into the water. A boiling heat hardens the outer surface at once, and thus keeps in the juices, which give richness, and which contain most of the nourishment. An excellent way of cooking corned beef is to have a large boiler with a wire or wooden rack on the bottom for the meat to rest over the water. When the water boils, place the meat upon the rack and put on the cover of the boiler with a cloth over it to keep in the steam. The heat of the steam will rise above the boiling point and penetrate the meat, and cook it more quickly and better than could be done by boiling.—*American Farmer.*

Simple Recipes for Making Vinegar.

T. B. Miller of Clayton, Ind., has communicated to the New-York Farmers' Club the following simple recipes for making vinegar:

"Fill nearly full any vessel, jug, crock, pan, tub or barrel, with pure rain or soft water, sweeten it with any kind of molasses, (the quantity is not material,) set it in a moderately warm place, or in the sun, cover with sieve, gauze or net, to keep out flies and gnats. In due process of time it will be vinegar, when it must be put into a suitable vessel and stopped close. To convert cider into vinegar—if made from sweet apples, it is only necessary to set the barrel in a warm place and knock out the bung; if from sour, stir in a little molasses, and when sour enough bung up tight. Vinegar barrels should be well painted, as they are liable to be eaten by worms.

It will be proper to state that it is the action of the atmosphere, which in time converts the sweetened water into vinegar, hence the greater the surface of water exposed to its influence the sooner it will sour. There is a thick scum rises on the top of the vinegar when making, which is the 'mother,' and should not be thrown away."

A New Tooth Powder.

Dr. Delabarre has been induced to recommend carbonised rye as a tooth powder, from the fact that in all those countries where bread made of rye is the food of the generality of the inhabitants, the latter are remarkable for the whiteness, strength and durability of their teeth. Savoy and the Landes are instances of this truth. Schrader has found 500 grammes of ashes of rye to contain 7 grammes of carbonate of lime, 9 8 of carbonate of magnesia, 7 2 of oxides of iron and manganese, and 1.9 of silica, all of which substances have a favorable effect on the teeth Hence—and from his own experiments—Dr. Delabarre concludes that rye carbonized and finely pulverized, used daily as a tooth powder, soon stops caries, and promptly cures the small abcesses which are often formed on the gums.—*Galignani.*

☞ Mr. George Cary of this city, we are pleased to learn, has hired for the season, of Mr. J. C. Taylor of Holmdel, N. J., his South-Down ram "Vigor." Vigor is two years old, and is every way a very superior animal, and worthy of his parentage. His sire was a son of "World's Prize," and his dam a ewe imported from Jonas Webb's flock in 1859. We are glad to see such sheep introduced into our county.

GOOD AND BAD FRUIT.

The remark is often made, that "it is as easy to raise good fruit as bad." This refers to the varieties propagated and planted out. In other words, it is as easy to graft a pear tree with a Seckel and Sheldon, as with a choke pear, or a Colmar d'Aremberg. We may as well raise the Swaar and Northern Spy as the worst imaginable sour and astringent cider apple, so far as the occupation of the ground is concerned. A frost or chicken grapevine will bear no more than a Delaware or Rebecca; a horse plum grows no more readily than a Lawrence, Gage or McLaughlin. Hence all the care taken by pomologists and horticultural societies to import, gather up, prove, examine, and select the finest and most valuable sorts; fortunes have been invested in experiments of this kind, and the expenditure has been well repaid.

But this is not the only care and labor needed to obtain the best fruit—if it came without further attention, we should rate it too cheaply, and not sufficiently appreciate the blessing. In travelling through the country, and visiting the grounds of fruit raisers, and examining the exhibitions of pomological societies, a very marked difference is observed in the same variety as grown on different grounds. In one case it is small and poor flavored; in another it is large, beautiful, rich and excellent. The owner of the poor fruit is much disappointed in what he expected to see, and considers himself as "badly humbugged" by the nurseryman who sold him the trees. The successful cultivator takes his specimens to a fair, and sweeps off the premiums with their excellent quality and magnificent appearance. Now the question at once arises, what is the cause of this difference? And it is just such questions as we like to hear asked.

1. The first, and perhaps the most prominent cause, is *cultivation*. Place a tree in grass land—or give it no cultivation—let the surface become baked hard, like flagging, or allow weeds to cover the surface—and the tree will have a feeble growth, and the fruit, as a necessary consequence, will partake of the condition of the tree. A feeble tree will, of course, bear small fruit. Hence one reason why young trees often produce larger and finer specimens than old and stunted trees. Cultivation alone has often changed both size and quality in a surprising degree. Some years ago a few trees of the Seckel pear were observed to bear very small fruit; they were then standing in grass, when the whole surface was subjected to good cultivation. The next crop had pears at least triple in size. A St. Ghislain tree, on another place, in grass land, bore some of its first crops, and disappointment was felt at the small size and poor quality of the pears. A herd of swine afterwards accidently rooted up the grass and reduced the land to a mellow surface. The pears that year were greatly increased in size, and so much improved in flavor that they would not have been recognized as the same. The Duchess Angouleme, when large and well grown, is an excellent fruit. When small, it is perfectly worthless. T. G. Yeomans of Walworth, N. Y., who has been eminently successful in its cultivation, and obtained $35 per barrel for it, has found high culture of vital importance, and has remarked that when the specimens do not weigh over four ounces they are *no better than a raw potato;* and this, we think, has generally been found true. There is no question whatever that this fine pear, as well as many other fruits, have been placed on the rejected list by some planters for want of good management, and deficient or no cultivation.

2. There is another requisite for obtaining good fruit—almost as important as the other, and in some respects more so. This is *thinning the fruit on the tree.* And yet it is scarcely ever practiced. The farmer who takes great care not to have more than four stalks of corn in a hill, and who would consider it folly to have twenty, never thins any of the twenty peaches on a small shoot, and they are crowded, small and flavorless. The gardener who would allow twenty cucumber vines in a hill, would be called an ignoramus by his neighbor who at the same time suffers a dwarf pear to bear five times as many specimens as it could profitably mature. The herdsman who should attempt to summer ten cows on an acre of pasture, is not greatly unlike the orchardist who allows his apple trees to bear more than the trees could profitably support; and ten starved cattle would be a counterpart of the numerous stunted specimens of fruit.

E. Moody of Lockport, a very successful fruit marketer, lately stated before the Fruit Growers' Society at Rochester, that he had found great profit in thinning the fruit on his peach trees; that while he had much fewer specimens in consequence of thinning, he had about as many bushels; the larger peaches could be picked in far less time; and while his fine crop sold readily at a dollar and a half per basket, his neighbor, who did not practice thinning, found it difficult to sell his for thirty-seven to fifty cents. President Wilder said, in his recent address before the American Pomological Society, "One of the best cultivators in the vicinity of Boston has reduced this theory to practice, with the happiest effect, in the cultivation of the pear. He produces ever year superior fruit, which commands the highest price. Some have doubted whether this practice can be made remunerative, except in its application to the finer fruits. But another cultivator, who raises an annual crop of the best apples, assures us that the secret of his success is the thinning of the fruit, and he has no doubt of the economy of the practice."

These two practices—*good cultivation* and *thinning the crop*—are the foundation of the difference between such superb and magnificent specimens of the pear as graced the extended tables, and densely filled the vast hall occupied by the Massachusetts Horticultural Society, and such miserable fruit as we sometimes see borne on the grass-grown, weed-choked, mice-gnawed, sickly-leaved, forsaken trees on the slipshod farmer's grounds—planted out with hardly the expectation, but rather with a sort of dim hope that they would grow and take care wholly of themselves.

One of the best things that a horticultural or pomological society could do, would be to place conspicuously on exhibition a collection of such splendid fruit as might be raised under all the favorable influences of good culture and judicious thining; and another collection beside it with all the marks of small size and scabbiness which might be expected from utter neglect. One collection should be marked "FRUIT RAISED UNDER THE EYE OF INDUSTRY AND VIGILANCE," and the other labelled, "FRUIT ALLOWED TO RAISE ITSELF."

Pruning should not be omitted as an important requisite, but so far as its influence on the fruit is concerned, it comes uuder the same head as thinning, and is indeed a useful auxiliary to the latter. A peach tree may generally have its fruit readily and easily thinned by cutting back; and an apple tree that is pruned at the top by thinning in from the outside, (instead of trimming and thinning up from below, and leaving the outside as thick as

ever,) may have the proper number of specimens easily controlled.

Orchardists have got to take hold of this matter. Orchards are increasing in number, competition will arise, purchasers are improving in discrimination, and will not be satisfied to pay much for poor stuff. Shrewd orchardists, who know how to secure a permanent demand for their products, as well as to obtain the highest prices, will be first to adopt these modes of manufacturing the finest article and unless others fall in they will be left in the lurch. The next twenty years, if the world moves on as it has done, will witness an astonishing education in the masses, in a knowledge of excellent fruit, and in the discrimination between a poor and a fine article. If they can be supplied with the latter, they will buy and consume; if nothing but the former can be had, they will reject it with disdain. This will become true to a great extent, sooner or latter, and the raisers of fruit for market must trim their sails accordingly.

[For the Country Gentleman and Cultivator.]

Small Pox among the Indians and Prairie Wolf in Oregon in 1853.

I find the following in Dr. J. G. Cooper's report on the mammals collected in the Explorations and Surveys for Railroad from the Mississippi to the Pacific Ocean. The survey was made under the direction of the late Gen. I. I. Stevens, who fell at Chantilly on Monday Sept. 1, while gallantly leading his brigade in a bayonet charge upon the rebels.

The Dr. says, "In 1853, during the small pox epidemic among the tribes north of the Columbia, the natives, frightened, left their dead unburied. These were devoured by the Prairie wolves, who shortly became afflicted with a terrible skin disease, in which the hair fell off, and the whole surface of the body became covered by scabs and putrid sores, which, irritated by the sun, wind and sand, were a dreadful annoyance to the miserable brutes, who undoubtedly perished in great numbers."

CATTLE DISEASE IN VERMONT—SMALL POX AMONG THE SHEEP IN GREAT BRITAIN.

By notice in the Co. Gent. of 23d October, I learn that there is a "fatal disease among cattle in Vermont," and that there is great danger in skinning the dead cattle or working the hides at the tannery. Such being the facts, the greatest caution should be used in the disposition of the animals after death. They should be deeply buried beyond the reach of dogs, swine, &c., as in all probability it would be death to all animals feeding upon the flesh of these dead creatures.

By recent accounts from English papers we also learn that there is a fatal disease prevailing among many flocks of sheep in England. The disease is termed "small pox among sheep." Probaby dogs or other carnivorous animals feeding upon the carcass of sheep dying of small pox, it might have the same effect upon them that the feeding upon dead Indians by the prairie wolves had upon them.

At any rate, the utmost care should be used in selecting sheep in England, for importation into this country. Before the year comes round we shall want all the wool that our entire flocks can furnish, and we had better never import another sheep from Europe, than to introduce this "sheep small pox" among our flocks. L. Bartlett.

October 27, 1862.

A SWISS SOUP.

Boil three pounds of potatoes, mash them well, and add slowly some good broth, sufficient for the tureen. Let these boil together, then add some spinach, a little parsley, lemon, thyme and sage, all chopped very fine. Boil together five minutes; pepper and salt to taste. Just before taking it off the fire to serve, add two well-beaten eggs.

TREATMENT OF CREAM IN WINTER.

Deep or Shallow Pans.—In order to determine with certainty the results of setting milk for cream in deep or shallow pans, I have made several experiments, and, although on a small scale, they have been made with accuracy and care.

The milk from two cows was mixed at each milking, strained into common-size pans, and allowed to stand 48 hours. At this time the cream became hard, and was skimmed off wholly free from milk. The milk had been measured in each pan when strained, and when skimmed the cream was measured and weighed, but I do not place full reliance upon the weight, as our common steelyards were used. Believing that temperature has effect on the milk, it was kept as equal as possible each day. No fire was kept in the room during the night, and I estimate the average temperature of the room at 46°. The temperature from 9 A. M. to 9 P. M., was 65°. The position of the pans was similar, being on the same shelf. The following is the result:

In pans containing	1 quart,	the cream measured	1	gill.
do.	do.	2 quarts,	do.	do.	2	gills.
do.	do.	3	do.	do.	do.	2¼	do.
do.	do.	4	do.	do.	do.	3	do.
do.	do.	5	do.	do.	do.	3¾	do.

The same experiments were tried twice successively with the same results. For another experiment the milk was allowed to stand 72 hours, but *without any addition* to the measure of cream. The question will readily occur, whether there would be any difference in the per centage of *butter* in either of the above experiments. This I cannot say, but I am positive in my own mind it is in favor of the milk in *shallow pans.*

I have experimented in various ways in the treatment of milk and butter-making, and have come to the following positive conclusions, viz: Milk should be strained immediately after milking, and that two quarts is sufficient for one pan. No more cream is obtained from milk which has been heated, than from that which has been kept in a room of the proper temperature. Cream should be kept at the same temperature after being skimmed, as before, during cold weather; also it should be stirred twice a day, and a little salt stirred in two or three times while being gathered for a churning; this will prevent the white particles of curd seen in butter. Forty-eight hours is sufficient for the milk to stand before being skimmed, if proper treatment is pursued. For churning the cream should be warmed gradually. This, Mr. Editor, is in my humble opinion the best method of treating cream during the winter months; for summer my method is somewhat different. A Farmer's Wife *in The Homestead.*

TURNIPS FOR MILCH COWS.

Milo Smith of Northampton, in a communication to the Homestead, made the following statement: "We tried one of our best cows in milk recently, that was fed half a bushel of turnips a day in addition to her other feed, by weighing her milk carefully for one week. We then left off feeding the turnips, while her other feed was precisely the same. She dropped off on her milk from two to three quarts per day, and on returning the feed of turnips, she came back within three days to her full flow of milk. This difference in the quantity of milk, as we sell ours, makes the turnips worth from 15 to 18 cents per bushel, and I think they can be raised for much less than that."

Boils.—A correspondent of the *Prairie Farmer* gives the following recipe to those suffering from one of Job's curses. It is intended for "finishing off" the bolis, after they have attained their heading: Take a glass bottle, fill with water as hot as the skin can bear to have near it, empty the same out, and apply the nose of the bottle to the wound while hot. In a second or two, such a rushing out of the causes of all this trouble will make short work of Mr. Boil. Of course, the boil should be ripe for discharge.

Don't fret on account of your bankruptcy. Your creditors will do it for you.

[For the Country Gentleman and Cultivator.]

Wintering Cattle---Cut vs. Uncut Feed.

Messrs. Editors—I was a good deal interested during the past winter, in reading the articles in your valuable paper, on the subject of cutting feed. Upon this important point as on stabling, I am sorry to differ with such a practical and experienced agriculturist as John Johnston, Esq., and yet, as it regards the latter, if I had a small stock, and could arrange my sheds so as to shelter them perfectly, I do not think that we would differ very widely on that point. Even then, however, I should prefer the sheds enclosed, and a loose box for each animal. But with a large stock, and where you wish to keep as many as your room will accommodate, my judgment is that the most economical way, both for room and feed, is stanchions.

Since my correspondence with "Old Hurricane," I have expected to see him, as he accepted my invitation to visit this good old Dutch town. I looked for him during last summer and autumn, but "could'nt see him," and have now almost given up his coming, but have not given up cutting stalks, although J. L. R. of Jefferson county, has come to the conclusion that he would not give a man his board for performing the labor of cutting stalks and straw for a large stock. He farther states that he has been in the habit of cutting much feed, but during the last winter he cut none at all, and he does not think that either himself or his cattle have been the gainers by cutting. In describing the feeding of his stock in a general way, he says he should think they had not consumed any more fodder, and with as little waste as when it was cut for them.

Now this is simply a wholesale denunciation of a system, which, having been tested by actual experiment, has been proved to be both economical to the feeder and beneficial to the animals fed. I am fully convinced, and am fully prepared to demonstrate that the same amount of coarse fodder will feed nearly twice the number of cattle, after it is properly chaffed, that it will in its long state; and with cornstalks alone it will do fully that, if not more. I wintered the past winter sixty-five cows, one pair oxen, eight horses, two colts, and thirty-five ewes. From the time we commenced feeding, about the middle of November, to the first of March, we did not feed two tons of hay to the whole stock. They all eat cornstalks, cut and crushed by one of Hickok's large machines, and our cows continued to eat them up to the 9th day of May.

A good farmer told me the other day, that "stalks would do pretty well to winter cows on, but they wouldn't do to spring them with." Now if J. L. R. is of that opinion, I should be glad to show him the animals. I did not feed them on stalks only,—nor have I mixed meal with what he chooses to style this nearly worthless article of fodder,—but I have given each cow that was being milked, a good mess of brewer's grains and four quarts of buckwheat bran and canail ground together, and four quarts wheat bran (which was light,) per day. The wheat bran and grains I consider nearly worthless except for milk. As soon as a cow was dried off, we took away her grains and wheat bran, giving her cut stalks and four quarts buckwheat feed, and then she would improve in condition.

During the winter while we were feeding nearly a hundred baskets full of cut stalks per day, there was not an average of five baskets full wasted. These stalks were not grown for fodder—they were nearly all cut up by the ground, and large stalks from which some good corn had been taken.

Our method of feeding cornstalks is to have the mangers so divided that each animal has a separate box for its head. After they are in the stanchions and begin to eat, they can neither see nor be interfered with by their neighbors. The stalks are thrown in dry, and the bran for the milch cows being wet, they receive their portion on the stalks. Of course they eat the bran first, but while eating it they contrive to get those "tasteless dry corn-butts" so coated that they eat them nearly all. From one stable of 30 cows I am confident we did not waste thirty baskets full per month. Now if J. L. R.'s cattle will eat stalks as clean as that without cutting, they will do more than ours; and although he is so weak in the "spinal column and weaker in the faith," I would like him to show me the animals that will eat cornstalks six feet long as clean without cutting as they will when cut and crushed for them. I do not call the above *high feeding*, but our cows have been fed regularly—have had pure water twice a day—they have had no bedding, and the only mistake I have made is in not selling some of them for beef before they approached so near the time of calving. Many of them were good beef in May—at all events I am willing to compare stock with my friend J. L. R., and compute the cost per day of keeping them, or I will next winter start 10, 20, 30, 40, or 50 head of cows. I will feed cut feed by weight, and he shall feed long feed by weight—fix the price of hay, stalks, and straw—also of ground feed, and then carry them through to May 1st, and see who can do it the cheapest and have the best looking animals.

KALABARAGH.

Farm Improvement—"L. W.," in the *Boston Cultivator*, mentions the case of a farm that, when bought by its present owner, "would not subsist summer and winter, more than six head of cattle, which will now keep thirty head and leave hay to sell besides." It has been made productive by using manure and peat compost, (so at least we understand his statement) and the draining and cultivation of swamps and waste land. If every farmer in like situation would invest in these improvements, their farms would soon double in productiveness and value. B.

Digging Potatoes Late.—*Editors Country Gent.*—The practice of your Morristown, N. J., correspondent of digging potatoes late, is also the practice here. It is known that potatoes left in the hill till late, will lose all their rotten ones. These will decay, and that rapidly, and leave only sound ones,—though it must be confessed that sound ones are few and far between some seasons. This year the crop is a good one, with few rotten ones: and the rot is late. The peach-blows have just commenced to rot. F. G. *Starkville, N. Y.*

Care of Horses.—Believing that prevention is in all cases better than cure, one of the most eminent Veterinary Surgeons in Scotland has been pointing out to farmers some of the causes of disease and death among their horses. One of these might be taken into consideration by some in this country, and if due warning is taken, a change of management would result. The cause of disease referred to, is turning out horses to pasture after working all day, even when warm, and also whether the nights be wet or dry, cold or warm. Horses must thus be often chilled, and are thus exposed to diseases of the lungs, and to rheumatic ailment. A.

Foreign Grapes in the Open Air.—I have been trying for 15 years to raise foreign grapes in the open ground, and have failed in pruning and protection all the time. This year I have succeeded. I have had 46 fine large bunches on one vine, the growth of last year. I have employed French, German and English gardeners to graft the foreign on the wild and common grapevine. They have all failed in my grounds. This spring I have succeeded as easily as on the apple. The only science is *to know when to do it.* Some time I may write these things out for you. J. C. J. *Louisville, Ky.* [We should be very glad to receive full details of the experience of our correspondent. Eds.]

KERRY COW.

THE KERRY CATTLE.

Considerable attention has been attracted to this Irish breed, especially to the cows, as good milkers, hardy, light feeders, and well adapted to rough and scanty pastures. They are usually jet black in color, but not always; about the size of the Jerseys, of compact and symmetrical form, "combining the fore quarters of the Devon, with the hind quarters of the Durham." Of those imported a few years since, and shown with their descendants, at the recent Norfolk Show, the *Boston Cultivator* remarks as follows:

"Of distinct breeds, there were on the ground seven of the Kerry herd of Arthur W. Austin of West Roxbury. The lot consisted of two imported cows, three yearlings and two calves. From a statement furnished by Mr. Austin, it appears that one of the cows has given sixteen quarts of milk a day, by actual measurement, the present season. Others in the herd have given nearly as much. The young stock have thriven well, and the whole herd show that they appreciate the advantages which this country affords them over the rough, bleak mountains of their native land."

Hon. John Wentworth, writing to the *Prairie Farmer* of the same herd, says:

"They are remarkably gentle, and their hair is uniformly very thick, showing their ability to withstand the severest winters without shelter. Mr. Austin has experimented with them upon different kinds of pastures and expresses the belief that they are emphatically the "poor man's cattle," yet it is likely that they will be monopolized by the rich for some time to come. Whilst I will say that they are exactly the breed of cattle for the mountainous pastures of New England, I will also say that if I lived out in the open prairie, had no barn, could keep but one cow, I would prefer a little black Kerry cow to all others."

NOTICE TO DEVON BREEDERS.—The Committee on Devon Pedigrees, appointed by the Association of Breeders of thorough-bred neat stock, will receive pedigrees for publication in the American Devon Herd-Book up to Dec. 3d, at which time the committee meet at South Wilbraham, Mass., to examine pedigrees and prepare them for the press. Other agricultural papers will confer a favor by noticing this fact. H. M. SESSIONS.

South Wilbraham, Oct. 29.

OSAGE ORANGE HEDGES.

In the report of the Committee on Farms, of the Illinois State Ag. Society, published in the last No. of the Journal of that Society, we find the following description of the Osage Hedges on the Farm of Mr. S. B. Turner of Warsaw:

The great feature of the place is its Osage hedges, which, with the exception of some twenty rods of post and board, to cross a piece of low ground, is the fencing. They are well made, and proof against any and all descriptions of farm animals. It is handsomely trimmed in the obtuse conical form, which gives it an ample base, and at the same time exposes the leaves to the sun. The most of the fence is made with a single row of plants, but Mr. T. prefers two rows set alternately thus: *** This gives at once a better base, but for farm purposes we doubt if it is better than a single line set four inches instead of two lines at eight inches; the same number of plants are used, and the cost of the setting about the same. Mr. Turner's hedges are all perfect, that is, there are no breaks in them, and but one place where a small dog could get through, and that was for the purpose of letting the ratters through into the next field. The fences are a perfect mass of verdure, armed with its bristling thorns concealed beneath the leaves, but ready, on the approach of an enemy, to dispute his passage. The hedge should be trimmed twice a year, the first in June and again in September or first of October, but never during a drouth—this has reference to the full grown hedge. Mr. T. uses a short scythe; one man can trim a hundred rods a day on both sides, and do his work first rate. Trees should not stand in the fence line, especially when young, as the shade retards their growth. Along side of a timber belt it would be different, for there the hedge would have the sun during part of the day.

PREMIUMS ON FLEECES OF FINE WOOL AT STATE FAIR.—The report of the committee on 20 fleeces of fine wool, awarding the first and second premiums to GEORGE BROWN of Phelps, Ontario county, was not received until after the list of premiums was published. The committee report that the fleeces, (40 in number) were very superior in quality and condition, and were accompanied by the statements as to feeding and weighing the sheep, &c., as required by the Society, and Mr. Brown is justly entitled to the first and second premiums.

B. P. JOHNSON, Sec'y.

AGRICULTURAL ROOMS, Albany, Nov. 6, 1862.

THE CULTIVATOR.

ALBANY, N. Y., DECEMBER, 1862.

TO THE FRIENDS OF THE CULTIVATOR.

Upon the Last Page of this Number will be found our terms for 1863. Those who have already received by mail a prospectus for the new volume, are earnestly invited to circulate it among their friends; and, if they cannot themselves attend to the formation of a Club, will they not see that some one else undertakes it *at once?* The month of December is the all-important season for such an undertaking, and those who are *first in the field*, are generally the most successful.

Copies of the Annual Register have been already sent, for use in canvassing, to many of our Agents, of the longest standing. If there are *any who have been accidentally omitted*, will they please inform us, in order that the omission may be promptly rectified?

The War Map referred to in our terms, is one of great beauty and perfection, Engraved on steel and colored by hand, and is *just twice the size of one entire number* of the Country Gentleman. As we cannot give up our space, wholly occupied as it is with Practical Agriculture and Horticulture, to the subject of the War, this Map, fully explaining itself without trespassing upon other space, and affording exactly the information now most desired in every household, will be found the most welcome and appropriate present which could possibly accompany a subscription for our Journals.

A Copy of this Map, we think, need only be shown, to secure the subscription of nearly every farmer to whom application is made. We will send a sample, strictly for use in procuring subscribers, or receipt of *Fifteen Cents.* It covers a space of nearly fifteen square feet, is colored by hand, each State separately—shows all county boundaries with entire distinctness, and gives the name of every town, village, and stream of any importance—having been revised and completed to the latest dates received up to the present month, and is one of the handsomest and best specimens of Map engraving we have ever seen.

About Remittances.—Remittances should be made in United States or New-York currency, where practicable, but the bills of any Bank in good standing, wherever situated, are received at par. *All Registered Letters, containing money, are at our risk.* Large sums should be sent by draft on New-York, Albany, or any other Eastern city. Our friends are particularly requested *not* to send us fractional notes or "shinplasters" issued either by corporations or private parties. Change can be remitted either in the Government postal currency, or in ordinary Post-office stamps—we prefer the currency where it can be obtained. But "shinplasters" issued out of Albany, are of no use whatever to us.

To Canada Subscribers, so long as the present rates of exchange continue, there will be no extra charge for American postage, if their subscriptions are remitted in bills of their own specie paying banks. But if remittances are in American currency, they will add as heretofore, *six cents per copy* for The Cultivator, to the published terms, and twenty-six cents per copy per year for the Country Gentleman, as that is the amount of the postage we are obliged to pay on the two papers respectively to the Canada lines.

Club Subscribers need not all be located at the same Post-office.

TERMS OF THE COUNTRY GENTLEMAN.

The Country Gentleman contains sixteen large pages every week, and forms two volumes per year of 416 pages each—subscription $2 per year, or $2.50 if not paid strictly in advance. The volumes begin with January and July.

The Country Gentleman for 1863.

One Copy	$2.00
Three Copies	5.00
Five Copies, (with one Map as Premium to Agent,)	8.00
Ten Copies, do. do. do.	15.00

The Country Gentleman and Annual Register for 1863.

One Copy	$2.25
Two Copies	4.00
Four Copies, (with one Map as Premium to Agent,)	7.00
Ten Copies, do. do. do.	16.50

For Ten Dollars we will send Five Copies of the Country Gentleman for 1863, with Five Maps, and an extra copy of both the Paper and the Map to the sender of the Club.

Club Subscribers who pay $1.50 by the terms given above, may also receive the War Map by adding fifteen cents each. Thus a Club of Ten, all of whom wish it, may remit $16.50 for ten copies of the Country Gentleman and Ten Maps, or $18 if ten copies of the Annual Register are also desired.

The Country Gentleman in a Cultivator Club.—In making up Clubs, a subscription to the Country Gentleman at $2 a year, will count the same as Four Subscribers to The Cultivator, and the subscriber to the Country Gentleman will receive one copy of the Register. That is, Five Dollars will pay for one copy of the Country Gentleman and six copies of The Cultivator, each subscriber receiving a copy of the Register. And Ten Dollars will pay for six copies of The Cultivator and four copies of the Country Gentleman, each subscriber receiving a copy of the Register.

☞ Agents who wish the Register to supply to every subscriber as fast as they take his name, can remit for them at the rate of Fifteen Dollars a hundred, (15 cents apiece,) and on completion of their lists, send the remaining 35 cents for each subscriber. This has proved an excellent plan; each subscriber, as soon as he pays his Fifty Cents, receives one-half the money back in a Twenty-five cent book, and the Agent has no farther trouble in the collection of the money.

The Register Postage Free.—We shall prepay the postage on all copies of the Annual Register without charge to the subscriber.

Address, LUTHER TUCKER & SON,
Albany, N. Y.

High Farming.—"We positively believe," remarks the Agricultural Editor of the *N. Y. Evangelist*, "that the majority of farmers would be better satisfied and more richly rewarded, if they would feel their way cautiously, but not very slowly, to a higher style of farming—one which undoubtedly they would find more expensive when they reckoned by the acre, but which we verily believe would prove less costly when reckoned by the qualities produced; less profitable perhaps the first year of trying it, but pretty sure to be more remunerative the second year, and still more the third, and onward."

It is a fact proved in hundreds of instances, but as yet but half believed by the majority of farmers, that "high farming, with large crops, is more lucrative than low farming with consequently small crops."

A Good Appointment.—We notice with great pleasure that James S. Grennell, Esq., of Greenfield, has been appointed Chief Clerk in the Agricultural Department at Washington. We have been in the habit, for several years, of meeting with Mr. Grennell at the Farmers' Clubs in western Massachusetts; and, but a few weeks since, had an opportunity of making a thorough examination of the farm conducted by him. We feel warranted in saying that in point of intelligence, and untiring industry in its application, as well as in a real interest in the advancement of practical agriculture, Mr. Grennell is a fair representative of the front rank of New-England farmers; and that it is fortunate for all concerned that the sphere of his influence and usefulness has been so much enlarged.

We cut the above from the *Massachusetts Ploughman.* Mr. Grennell has for a number of years conducted the affairs of the Franklin County (Mass.) Agricultural Society, as Secretary and Treasurer, with great credit both to himself and to the farmers of that county; he is one of the members of the Massachusetts State Board of Agriculture of longest standing, and has contributed a number of valuable articles, not only for its annual reports, but also for those of the Agricultural Department of the Patent Office. With a considerable knowledge of the agriculture of the Eastern States, derived both from experience and observation, he unites the advantage of some years' residence at the West, where he had also an opportunity of studying the systems of farming practiced. His name was suggested for his present position, on the part of Massachusetts, at an early period after the establishment of the Department, and we are heartily glad to see that the appointment has been at length offered and accepted where we are confident of its being so well and usefully filled.

The Department of Agriculture, if rightly directed, may be made of great service to the Farmers of the country. We hope to see its officers, by degrees, evolve from the errors and confusion of the past, a bureau which shall prove an efficient means of advancing our Agricultural interests, of collecting and disseminating information heretofore unsought or inaccessible, and of representing in the councils and policy of the nation, that great class upon whom its prosperity so largely depends, but who have hitherto been so rarely consulted, even in matters in which they are most immediate concerned. But while the true position and influence of this Department cannot be at once attained, we shall watch its initial operations with great interest, since so much depends upon a good beginning, as regards the credit and standing to be acquired for it, both with the other branches of the government and among the people at large. Mr. Grennell has brought to the arduous duties of his post, an intelligent and persevering determination to perform them well; and, with due co-operation and support, the prospects of the Department must be the brighter for his having been appointed.

Imports of Breadstuffs into Great Britain.—Our latest foreign exchanges give the Trade and Navigation Accounts, showing the English Exports and Imports officially for the first eight months of the present year, ending with Sept. 1. These returns manifest, as we already know from our own heavy exports, a vast increase in English imports of wheat and flour during the month of August. Up to June the general deficiency of the wheat crop was only half believed in, in Great Britain, and the imports for the six months were nearly 2,000,000 bushels less than they had been in the previous year. Early in July the fact of the smallness of the crop had become too patent to be doubted, and when the month closed the imports had reached a point higher than in 1861. Throughout August, wheat was brought in increasing quantities, and showed at the close an increase of 4,800,000 bushels as compared with the corresponding period of 1861, while in the month alone the quantity was nearly doubled. The total quantity imported in the eight months into Great Britain was 44,111,208 bushels, to which is to be added the equivalent in bushels for the flour imports, making a total equal to 48,357,944 bushels. The computation of the value of these imports is always a month behind the statement of their amount; and the authenticated cost of the seven months' imports only, for wheat and wheat flour was £14,578,826, and for the other cereals and legumes £4,689,467, being in the aggregate £19,267,293, or very nearly *a hundred millions of dollars* for the cereal food of the English nation purchased in other countries from the 1st day of January to the last day of July.

☞ We have already had several notices with reference to the appearance of Small Pox in Sheep, in England, during the past summer. The alarm arising from this cause is now constantly spreading. The breaking out of the disease in Wiltshire, where it was at first hoped that its progress might be stayed, has been followed by its more recent ravages among the flocks not only of the neighboring counties of Dorsetshire, Hampshire, and Berkshire, but also in the more distant and highly improved agricultural county of Lincolnshire. English farmers are now combining in various parts of the country to establish measures for self-protection if possible, and to form societies of mutual compensation for losses that may occur. Prof. Symonds, who has lately been appointed by the Government as a Special Commissioner to deal with the disease, strongly recommends inoculation as a preventive of its continued spreading, but Prof. Gamgee of Edinburgh is quite opposed to this method. There are two others under discussion—the attempt to prevent contagion by the complete isolation of diseased flocks, the thorough destruction by fire or otherwise of the carcases of those that die from this cause, or of anything else that can possibly convey the seeds of the disease,—and, lastly, the method of vaccination, as employed to prevent small pox among the human family. Jonas Webb and Henry Overman have just published letters strongly in favor of vaccination. Mr. Overman says:

"It was in the year 1848 that we suffered in our county from small-pox in sheep, when my late father vaccinated all his sheep, and with very great success. My father wrote in the papers upon the subject, and was at first laughed at; but many soon wished they had followed his example. He was the only man in the neighborhood that did vaccinate, and he had but one case, and that so mild the animal soon recovered. Our neighbors lost hundreds; some had it naturally, and others by the foolish and ignorant practice of inoculation. From what I saw then, I think a man is made to be gulled into inoculation. My father sent vaccinated sheep to his neighbors, for the purpose of testing the safety of their being with diseased animals: not one died; some took it, but had it in a very mild form, others were never attacked. Mr. Allan Ramsey heard of my father vaccinating through Mr. Jonas Webb, my father having advised Mr. Webb to do the same, as he was sending rams to all parts of the kingdom. My father went over to Mr. Webb's to meet Mr. Ramsey, and the result was that Mr. Webb had his sheep vaccinated."

The recollection of the vast destruction of sheep by

small-pox in 1847–48, as much as any particular losses that have yet occurred the present season, is what has excited so great alarm thus far; but there is nothing to lessen the feeling of insecurity so long as the scourge appears to be constantly making a progress sure although slow.

A VERMONT DAIRY.—A correspondent says: "I obtained the statement of one of our small farmers last March, in regard to his dairy, consisting of 15 cows, which he takes care of himself, intending to send it to the COUNTRY GENTLEMAN, but it got mislaid, and I can only give you some of the items from recollection. The *average* yield of butter per cow for the year was 230 to 235 pounds, which he sold at the highest market price—having sold his butter to the same produce dealer in Massachusetts for some 10 or 15 years. I think he said four of the fifteen cows were farrow. The regular feed for them is hay or hay and straw, and two quarts of unground oats per day in the winter season, the oats being given at 9 o'clock P. M., the last feed before sleep. When I saw them in March, they all looked as slick and thrifty as a bullock for the shambles."

☞ WM. BUCKMINSTER, who, we believe, established the *Massachusetts Ploughman*, and who has edited it for twenty-one years, announces in the last number of that paper, his retirement from his editorial duties, and that he and his son, who has been associated with him for some years, have disposed of the paper to Hon. HUGH W. GREENE, by whom it will hereafter be published. Mr. B. retires, in the 79th year of his age, with the best wishes of his contemporaries, all of whom, we are confident, will unite in the desire that the days which remain to him here, may be as full of peace and happiness, as the past score of years have been industriously devoted to the good of his brother farmers in "the old Bay State."

A CONVENIENT ASH-SIFTER.—We always feel an interest in all contrivances for lessening domestic or household labor, and every good machine for this purpose is worthy of special notice. One of the best things under this head, which we have lately met with, is the Ash and Coal Separator made by WM. LINES of Rochester. It appears externally something like a small neat case of drawers, about one-third the size of a common bureau. A peck of unsifted ashes is thrown in at the top, and the dust kept from rising by shutting down a lid. A slight vibratory motion of a lever for ten seconds does the work. The ashes is found in one drawer and the coal in the other. We have had it in use for some time, and find it the "handiest" thing of the kind we have seen; no dust can escape from it to the room; and the cost is only about three or four dollars.

ILLINOIS COTTON.—The Prairie Farmer states that Messrs. Sprague and Reynolds, extensive manufacturers of cotton at Providence, R. I., and who are intimately acquainted by personal inspection, with the cotton crops of the South, have recently visited Southern Illinois, and make a very favorable report. "In their opinion," says the Prairie Farmer, "the samples gathered in 'Egypt' are equal to any upland cotton grown in Carolina, Alabama or Tennessee. Yet these samples, of which we have some in our office, were not taken from thoroughly cultivated fields. It is thought by them, that with good culture, such as the crop usually receives in the Southern States, a *superior* staple can be produced, and in sufficient quantity per acre to make it remunerative to the producer, much more so, even at ordinary rates, than wheat or corn, and at present and prospective prices for quite a number of succeeding years, by far the best paying crop that can be produced in that part of our State."

☞ The Deseret News of October 8th, contains a full account of the "UTAH State Fair," which took place at Great Salt Lake City, Oct. 2, 3, 4. From the Directors' report we gather that the display of field crops was limited; that of vegetables better than heretofore; fruits and flowers "handsome and abundant;" the show of cattle very limited; horses and sheep apparently very few in number; and the classes of domestic and other manufactures such as to manifest gratifying evidence of improvement. As to cotton culture, this report says, "that in Washington Co., (Utah,) cotton culture is considered a decided success, not only in quality, but also in the quantity produced per acre. Mr. Graves exhibited a specimen of the Peruvian cotton tree, in pot, nearly a foot high, the seed of which was planted in the middle of July last, which he obtained from Peru, through a friend in Iowa." The remarks upon the display of fruits prove that more attention has been paid to the introduction of improved varieties in Utah than some of our readers will be prepared to expect. Thus "Mr. Ellerbeck's collection of grapes, which took the first prize, including the Chasselas, Musque, Rose Chasselas, Chasselas de Fontainebleau, early White Sweetwater, Child's Superb, Buckland's Sweetwater and White Frontignac were a good collection, though from young vines. The magnificent collection of California grapes from President B. Young's vineyard, elicited universal admiration. * * * The awarding committee have given to Mr. Ellerbeck's collection of strawberries the first prize. The Wilson's Albany, Vicomtess and Victoria are considered the best varieties for cultivation in hills, and the Scarlet Magnate for cultivation in beds.

PERSONALITIES.—A venerable correspondent writes us, protesting against the "personalities" which occasionally occur in the discussions carried on in this paper. We agree with him in his view of the matter, and endeavor to avoid, so far as we can, all allusions which seem to be intended as personally offensive; but many writers have a jocular way of alluding to their opponents with which we do not deem it our province to interfere, as they cannot always be expurgated without injury to the purpose of the writer, and because the allusions are so evidently good-natured, though sometimes somewhat sarcastic. If contributors would observe the same courtesy in their writings which they do in personal intercourse, there would be little danger of unkind feeling being provoked.

KEEPING CORN FODDER.—"J. L. R." says the best way to keep corn fodder is "in the stook." We have found it so by several years experiments. Sometimes when husking late in the season, corn drawn to the barn, we stook it around the barn-yard, setting first a large sized stook in the ground, and binding it, and then putting another row of bundles around it at the height of twelve to fifteen inches from the ground, and binding again. Such stooks invariably cure and keep well. Cornstalks stooked as husked in the field in large bunches, may be drawn into the barn and mowed away safely, after one of the dry freezing winds of winter, when there is no snow on the ground. J. H. B.

☞ New-York—the first State in the Union in point of Population, is the 17th in geographical area. It is the 4th in density of population, having 84 inhabitants to the square mile, while there are 158 in Massachusetts, 134 in Rhode Island, and 98 in Connecticut. These facts are derived from the Preliminary Report of the Census of 1860, for a copy of which we are indebted to Mr. Supt. Kennedy, through J. S. Grinnell, Esq., of the Bureau of Agriculture.

The Agricultural tables in this Report, show that although New-York is only the 17th State in Area, she stands 1st in the extent of Improved Land, Illinois being 2d, Ohio 3d, Virginia 4th, and Pennsylvania the 5th on this list. New-York also "stands at the head" in the cash value of her Farms, Ohio being here the 2d, Pennsylvania 3d, Illinois 4th, and Virginia 5th. In value of Farm Implements and Machinery, New-York again is 1st, Pennsylvania 2d, Louisiana 3d, Illinois 4th, and Ohio 5th.

In Live Stock, New-York stands 3d to Ohio and Illinois in the number of Horses; but in Asses and Mules she is the 23d on the list of States. New-York is first by very long odds, in Milch Cows, Ohio standing 2d with less than two-thirds as many; is third in Working Oxen to Texas and Missouri; and 5th in "Other Cattle," to Texas, California, Ohio and Illinois. New-York has the 2d largest number of Sheep, Ohio being 1st, Indiana 3d, and Pennsylvania 4th. In Swine we make no show at all, being 17th from the top, with Indiana 1st, and Missouri, Tennessee, Ohio, Kentucky, and several other States following close after her. But in the total value of Live Stock, New-York again heads the list, Ohio following next, with not quite eight-tenths our pecuniary amount.

As to Crops, New-York is the 6th State in the production of Wheat, the 2d in that of Rye, the 14th in Indian Corn, the 1st in Oats, the 8th in Tobacco, the 5th in Peas and Beans, the 2d in Barley (California being the 1st); the 2d in Buckwheat; the 1st in Orchard Products, in those of Market Gardens, and in Hay; the 3d in Clover seed and in Grass seed; the 1st in Hops, (producing nearly ten-elevenths of all grown in the Union,) the 1st in Flax, and the 1st in Maple Sugar, (producing more than one-fourth the total crop.) In amount of Wool, she stands second only to Ohio, and the difference in favor of the latter State is not so large as in the number of Sheep, showing either that our fleeces average heavier, or that more sheep leave the State of Ohio when young (which may be the case) to be fed or shorn at the East. Our product of Butter in New-York is set down at more than double that of Ohio,—not quite double that of Pennsylvania—the two States ranking next. Our product of Cheese is also more than double that of Ohio, and lacks comparatively little of being *one-half* the total product of the Union. The "value of animals slaughtered" is greater in New-York than in any other State. Our product of Honey is also at the top of the list.

These odd facts and comparisons do not amount to anything, except to gratify one's curiosity by showing to what objects our Agriculture is mainly devoted in this State as placed side by side with others.

Temperature—Sod vs. Soil.—Two experiments made last August, by a writer in the *Gardener's Monthly*, to test the comparative temperature of the earth six inches under the sod, and the same depth under a bare cultivated surface, resulted in a difference of eight degrees warmth in favor of the latter.

☞ There is one item in the American successes obtained at the late International Exhibition in London, which although not of an Agricultural character, we desire to notice with especial prominence. The London "Practical Mechanic's Journal," which is high authority, remarks:—"*By far the most interesting and important Engine* to the really instructed mechanical engineer *in the whole exhibition*, is, we hesitate not to affirm, that exhibited by Charles T. Porter of New-York, and named by him after the inventor, who is said to be a working man in New-York—the Allen engine." This steam engine, as we are informed by Col. Johnson, was substituted in driving much of the machinery exhibited, *on the failure of an English engine to perform the work.* In doing this, as well as from the new principles involved in its construction, it won from all who saw it the highest commendation, of which the above extract is but a single example. The Journal, from which this extract is taken, and a copy of which is now before us, gives a Plate of this engine, accompanied by wood engravings to show its manner of action, and a full letter-press description. It is matter of some congratulation that we are thus shown to excel the English mechanics, in a point upon which, of all others, their national pride is directly concerned—the employment of steam machinery; and it is peculiarly creditable to the maker of this Engine that he should have been able, after making it in this country (as stated in the Journal we copy from,) "in such haste to be in time for exhibition, that its parts were never even offered together until the engine was being erected where it now stands in the West Annexé,"—to put it up there in perfect working order, so that "it runs at the rapid speed of 150 revolutions per minute, and gives motion to a large proportion of the weaving machinery there exhibited."

One point connected with this Engine, and attracting as much attention perhaps as the construction of the Engine itself, was the *governor* invented by Mr. Porter, and capable of regulating the speed and action of the engine with wonderful certainty and promptness. For example, according to the Journal before us, "throwing off the belt from the drum, or in other words, *suddenly releasing the engine at its great speed from all load*, was instantly responded to by the governor, and *scarcely a visible difference* in the engine's speed permitted." The governor was tested in this and other ways, and found to succeeed with "great accuracy," says this account, "maintaining a uniformity of motion which it is *scarcely possible* to disturb perceptibly, even by the most extreme and sudden changes in the resistance."

Mr. Porter also exhibited a steam indicator invented by C. B. Richards, Hartford, Conn., which is characterized not only as "an extremely beautiful" affair, but also as performing work worthy of the highest praise.

We make this notice, not from the slightest acquaintance with or interest in this Mr. Porter, whom we never happen to have heard of before, but simply to show, in addition to the evidence heretofore published, that American inventors and machinists, with the slight encouragement asked from our Government at Washington, *might* not only have given to the United States the *first position* among all the nations represented at the Great Exhibition, in works of real utility, but also that the sales of their inventions, to the representatives of other countries as well as in England herself, would have done more—far more, to extend the foreign trade of the country and add to the exports of our machinery, than could have been

accomplished, in any other way, by a national appropriation of similar amount. We have thus, through the short-sighted views of our national legislators, lost an opportunity which may never be repeated,—or at least not for many years to come.

☞ Vol. Third of RURAL AFFAIRS, comprising the *Annual Register* for the years 1861–62–63 will not be out until about the 10th December. Those who have already ordered it will be promptly supplied with early copies, and other orders will be placed on file as they are received.

☞ Our friends are particularly requested *not* to send us fractional notes or "shinplasters" issued either by corporations or private parties. Change can be remitted either in the Government postal currency, or in ordinary Post Office stamps—we prefer the currency where it can be obtained. But "shinplasters" issued out of Albany, are of no use whatever to us.

☞ The following awards of premiums on Reapers, Mowers and Headers were made by the Executive Committee of the Illinois State Agricultural Society, after trial of the same in the field near Dixon, Illinois, during the harvest of 1862, to wit:

For the best Combined Reaper and Mower, to John P. Manny, of Rockford, Winnebago Co., Illinois,	Diploma and	$75
For the best Independent Reaper, to Walter A. Wood of Hoosick Falls, New York, on his self-raker,	do.	50
For the best Independent Mower, to E. Ball of Canton, Ohio, on his two-horse Mower,	do.	50
For the best Heading Machine, Barber, Hawley & Co., of Pekin, Illinois, on Haines' Harvester,	do.	50

As there was but one entry of one-horse mowers no premium was awarded, but the implement exhibited by Walter A. Wood of Hoosick Falls, New York, was regarded with much interest, was carefully tested and highly commended to those desiring a one-horse machine.

So also with grain binders; but one was exhibited, that by H. M. Burson, which was operated in presence of the committee, and, together with every other implement exhibited at the trial, will receive its proper notice in the committee's report. The regular report may not be ready for publication until after the annual meeting of the Board in January, 1863. The data from which it must be made up are not yet in possession of the Secretary.

FALL-SOWN GRAIN INJURED BY INSECTS.—The winter grain, sown this fall, looks well, where not destroyed by something like the lice that were so thick on the oats and wheat last and the present harvest. I have ten acres of wheat sown on oat-stubble, and if every stalk now living stood on three acres it would not be too thick, and it was getting thinner every day before the snow came. I pulled up a number of the stalks the other day and found from half a dozen to twenty green lice on the root or the stem under ground, there being no roots to be seen. The ground was in fine mellow condition, and the wheat drilled in and pretty deep. There are several other fields in the neighborhood affected in the same way, but all sowed and harrowed in. I heard of one spot in a field affected in the same way last season, but it was then thought to be the wire-worm. I was told this season it was a worm, and found a few small red worms in the drills, about an inch long and about as thick as an ordinary timothy stalk. It was only last week that I discovered the lice. I had intended sending you some for examination, but we have had such a fall of snow that I doubt if there are any left to be found. I would like to hear if the winter grain is affected in the same way in any other places where the grain louse or aphis was on the wheat and oats at harvest. The fields most destroyed here, as far as I have seen, are stubble, either oats or wheat. If so, what is the remedy, if any? E. T. C. *Delaware Water Gap, Pa.*

NORTHERN VERMONT.—Joseph C. Parmenter of Lowell, Orleans county, writes us that good unimproved land in that county, well located as regards railroads and water privileges, and in healthy situations, can be purchased at $2 to $3 per acre, and improved farms at from $10 to $15 per acre. The writer says—"The fact is, we have got too much land, and the war is thinning our ranks. Men with two or three farms, and fifty cows, have been left alone."

☞ In an article on the present value of land in England, the Mark Lane Express mentions that "in 1820 good land might be purchased at from £30 to £35 per acre. At present, £50 and £60 per acre are not uncommon prices; and an estate was recently sold in Suffolk at £77 per acre." No wonder the farmer must pay a high rent, when the landlord must invest $300 to $350 per acre in the purchase of the land.

BIG YIELD.—The California Farmer states that the farmers of Amador Valley have made splendid crops this year; and as instances says that on Martin's ranch the yield of wheat has been sixty-two bushels to the acre. A few acres yielded seventy bushels. The berry is very large and full. On a number of farms adjoining, the yield was about the same.

CALIFORNIA WINE.—The California Farmer says that strangers can have "no possible conception of the vintage of that State, unless they take the trouble to visit the vineyards or the wine cellars, where are found the products of the grape culture. M. Keller, Esq., of Los Angeles, has 100 acres in vines, and computes their number at 100,000. He has vines fifty-eight years old in his grounds; they yield fifty, sixty, and seventy pounds each. His crop of wine this year will be 100,000 gallons. His estimate is that a vine at six or eight years will yield one gallon of wine. He has now in store at his place in the cellar under the Russ House, 16,000 gallons of wine—red, white, port and angelica—with his brandy and wine bitters. His wines are among the best of those of California.'

CLOVER AS A FERTILIZER.—John Mears says in the *Boston Cultivator*, that a gentleman of Livingston Co., N. Y., in 1839, in conversation with him, "stated that a lot of land came into his possession, which by bad management had produced only six to eight bushels of wheat to the acre. He put it to clover, sowing two bushels of plaster per acre. This crop when brown from ripeness, was turned under. The process was repeated, and the lot was put to wheat, which yielded 40 bushels per acre for four acres together. While one of the crops of clover was on the ground, he measured off two feet square or four superficial feet, digging to the depth of one foot, and removing all earthy matter. It gave over one pound per foot, or more than 22 tons of vegetable matter to the acre.

☞ The California State Fair appears to have been quite successful, notwithstanding a driving rain which occurred the last day. The California Farmer reports the receipts at $11,383.25.

Inquiries and Answers.

APPLE POMACE.—Will you or some of your correspondents, please inform me what use, if any, can be made of the pomace which accumulates at the cider mill? As I have a mill, my neighbor's, with my own pomace, has accumulated to a great extent. Whether it will do for manuring purposes, or for any kind of stock to have access to it? A SUBSCRIBER. [It is of little or no value for manure. If fed fresh or before fermenting, it makes a good food for pigs, and in moderate quantities at a time, would be good for cattle.]

FLEMISH BEAUTY PEAR—HARDY SORTS.—How long does the Flemish Beauty pear usually take to fruit on its own stock? Will it do on quince? Where can I get that pear double worked? What variety do you consider the hardiest for summer, autumn and winter, having some regard to quality—one for each season? R. W. S. *Ottawa, C. W.* [The Flemish Beauty is an early bearer, often producing fruit in three or four years from setting out, and sometimes sooner. Early productiveness is so much influenced by soil, culture, and other causes, that no certain rule can be given, except that badly cultivated or neglected trees usually bear soonest. The Flemish Beauty usually succeeds if double worked, and frequently without double working. It may be obtained as a dwarf of most of the larger nurserymen of Rochester, and T. C. MAXWELL & Co., of Geneva, N. Y. Among the good hardy pears are Buffum, Sheldon, Urbaniste, Lawrence, Fulton, Tyson, and Osband's Summer.]

SORGHUM FOR CATTLE.—Can you inform me if "Sorghum," or "Chinese Sugar Cane," is a safe and nutritious food for cattle? If it is, I propose to cultivate some next season for that purpose, on account of its prolificacy of yield. If you can, please say whether it would answer best for *milking* cows or *fattening cattle*. C. R. A. [We believe it is a good food for cattle, but hope some of our readers who have cultivated it for this purpose, will give us the result of their experience.]

PLOWING APPLE ORCHARDS.—I have an apple orchard, some fifteen years old. Will it injure it to plow and sow timothy? It was set with timothy some five years ago, but has now turned to blue grass. Please give me some information what is best to do with it, and oblige not only a new subscriber but a new FARMER. *Ripley, Ohio.* [It never injures young orchards to plow and cultivate them, but if the ground is kept clean and mellow it is a great benefit to them. As the orchard becomes older, plowing or cultivation is not so vitally important but very useful. Unless the soil is very fertile, all orchards should be kept cultivated. Plowing once and seeding immediately to timothy would probably neither benefit nor injure the trees, but a timothy *meadow* is one of the worst things for any orchard. If the grass is closely pastured, and frequently top-dressed, the tress will probably do pretty well. As orchards become older, care is needed not to plow very deep after lying many years to grass, especially close to the trees, to avoid injuring the roots.]

WILD CRAB FOR STOCKS.—Will you please inform me through the columns of the next CULTIVATOR, if the wild crab could be used profitably as stock for grafting the apple or pear on? F. NICHOLS. *Lewis Co., Ky.* [Apples have done well on the wild crab, but the trees are somewhat dwarfed in consequence. Pears succeed occasionally, but the trees do not often live many years.]

COAL ASHES AS MANURE.—Will you please to state the value of the ashes of the Stone or Anthracite coal for manure? SUBSCRIBER. [The value of coal ashes is small, as they are mostly of earthy materials. Some potash is found in them, mostly from the kindling wood. Kept dry, they are, however, very valublae as an absorbent in privy vaults, &c.]

DWARF TREES.—To what age will the apple live when dwarfed on the paradise stock? Can pears be dwarfed on the paradise apple stock, and to what age will they live when dwarfed on the quince? J. B. D. [We do not know any very old dwarf apples, as they have not been cultivated many years in this country—we have no doubt they would live a long time. Pears cannot be easily dwarfed on them, and when succeeding for a time, easily break off. A few varieties of the pear, as Glout Morceau, Louise Bonne, Angouleme, and some others, if well pruned yearly and well cultivated, will live half a century or more.]

WILD CRABS FOR APPLE STOCKS.—As I am making preparation to raise a few crab stocks for apples, your remarks in reply to a correspondent in your issue of last week suggested one or two other inquiries: 1. To what size will the tree grow, compared with those on the free stock?—2. Is grafting or budding preferable?—3. How does the crab stock affect the tree in respect to the time of coming into bearing, the size of the fruit, &c.?—4. If there is no objection to these stocks, they may be desirable for those wishing a considerable number of varieties in a small orchard. AMATEUR. *Toledo.* [We have not a sufficient number of experiments, nor a knowledge of old trees raised on these stocks, to be able to answer satisfactorily. It is probable that the trees would be one-half or three-fourths as large as standard trees. Both grafting and budding will do, but budding is preferred, as making a better union. The trees would probably bear somewhat sooner, but no perceptible effect would be obtained on the fruit, or but litlle.]

DITCHING IN MUCK.—Is there anything better for ditching than a good shovel in the hands of an Irishman? I mean for swamp ditching. I am aware of the ditching plow plow for use in clay and dry lands. E. D. H. *Milwaukee, Wis.* [We know of nothing better than a good spade or shovel in a good active pair of hands. The ditching plow is only intended to obviate the use of the pick in hard subsoils.]

CULTURE OF HEMP.—I wish to make an inquiry through your paper, as to the growing of hemp and preparing it for market? I would like you, or any of your correspondents who possess the information, to give through the CO. GENT., the manner of planting hemp, and the cultivation of it? Also, how to prepare it for market, and if in your opinion it would be a profitable crop to raise at the present time? Cotton being so very high, could not hemp supply its place in many articles? J. C. A. *Clarksville, Iowa.*

RYE FOR SOILING.—*Messrs. Editors*—In your issue of Oct. 23d, G. L. asks the question, "If I cut rye for fodder in the spring, will there be a crop of grain from it afterwards?" From five or six years experience in raising this crop for soiling, I should say *no*. He further inquires, "How many times in a season can rye be cut for feeding?" This would depend very much upon the condition of the soil, and the fect of the winter upon the crop. If the ground is rich, and the rye has not suffered from winter killing, it may be cut three times, though the last cutting will be a great deal lighter than either the first or second—the first cutting will be the best. I once left a small piece after having cut it once, to see what the result would be, which was that the rye headed out and blossomed, but the kernel failed to make its appearance. In some of the heads there was a blasted resemblance of kernels, but they were entirely valueless. I think G. L. will meet with disappointment, if he attempts to "kill two birds with one stone" in raising this crop—feeding it off *after the stalks are formed*, and then get a crop of grain. J. L. R. *Jefferson Co., N. Y., Nov.* 1.

DAIRY HOUSE.—We hope some of our dairymen will favor us with replies to these inquiries:—I propose next spring to build a dairy, attached to a farm-house situated on level ground. I should like to know what would be the best size and arrangement for a dairy of 20 or 25 cows? what utensils and furniture would be required, &c.? ONTARIO CO.

TAKING WOOL FROM PELTS.—In answering T. E. A.'s inquiries I would say, wet the flesh side of the pelts thoroughly, and lay them, flesh sides together, for a few days until they become soft, when an application of good ashes or quick-lime, and the pelts laid together, as before, a few days, will start the wool; in this way more wool can be got than by shearing, and the pelt is then ready for the tanner. A. MOSS.

RINGBONE.—Will you be kind enough to inqure through the CO. GENT., what would cure the ringbone in a horse's foot, which seems to have been caused by a strain? It has been running on four months, and all remedies I have tried have proved useless. Probably some of your subscribers know what would cure it. A SUBSCRIBER. *Stephensport, Ky.*

TANNING MUSKRAT SKINS.—I should like to have some of your readers publish in your next paper, how to tan Muskrat and Mink skins with the fur on them, so that they will be soft and pliable. H. S. C.

HOGS.—Being desirous of improving the stock of hogs that I have at present, I would like to hear from some of your stock raising friends a statement of the comparative value of the Chester and the Irish Grazier, as regards rapidity of growth, keeping, fattening, size, perfection of form, and breeding qualities; and where I can get either or both, *warranted thorough-bred*, most convenient to Louisville, Ky. J. C.

GRAFTING CEMENT.—I made grafting cement last spring, from a recipe in the COUNTRY GENTLEMAN of April 24, page 271, and found it the best that I ever used, and think it worth a year's subscription for the paper. H. S. C.

[For the Country Gentleman and Cultivator.]

SURFACE APPLICATION OF MANURE.

The theory that "one load of manure on the surface is worth two loads plowed in," if admitted at all, must be admitted with very essential modifications. As a general rule, progressive farmers, tilling heavy tenacious land, with a clay subsoil, will demur from such a proposition. Practical experience shows that such soils need the manure buried in them, to warm, to lighten, and to destroy the tenacity, and thus fit them for the entrance of heat and air, two most important and essential elements of fertility, and without whose agency success in raising any crop cannot be expected.

On a light gravelly or sandy soil, the statement is applicable but in part, and with qualifications. Such soils are usually destitute of vegetable matter, which is needed to make them retentive of moisture and fertilizers. Vegetable matter must be furnished them, either by plowing in green crops, or a free application of manure well incorporated with the soil.

Land of medium quality, neither too heavy, wet and clayey, or otherwise too sandy and gravelly, is the most suitable to be top-dressed. But even in these soils it is a question whether top-dressing is the most economical. The effect of top-dressing is immediate, and makes an exhibit for about two years, but has hardly any effect on the soil, in either modifying or enriching it, and ignores entirely the use of the essential elements of progressive agriculture, viz., light, heat and air. The soil, to be permanently and economically improved, must be so tilled as to take the greatest possible advantage of these, which necessitates the use of the plow, spade, or their equivalents.

There is a very important advantage which mixing manure with the soil has over top-dressing; and it is a subject which has received too little attention, and has often been entirely overlooked by farmers, namely, "the fermentation of the manure in the soil;" or as a writer on English agriculture expresses it, "*making the whole field into a compost heap.*"

Dana, in his "Muck Manual," explains fully the philosophy of the process. Briefly stated it is this: Fermentation evolves alkaline gasses, which, uniting with the acids in the soil, produce, in sandy and gravelly soils, a chemical decomposition and disintegration of the silicates and insoluble portions of the soil, fitting them to become food for the roots and rootlets, and these again, as they grow, acting chemically as solvents of inert matter in clayey soils, causing disintegration and amelioration; and in a soil rich in vegetable matter, bringing it into active fertility. Thus a little manure incorporated with the soil, stimulates to action other elements of fertility than what exists in itself, which are both progressive and permanent. By plowing and cultivating, the soil is loosened and deepened, as well as modified, by bringing to the surface and exposing to the influence of light, heat and air, so that what was before inert, becomes an active agent in producing vegetation.

Top-dressing adds to the soil only at best a homeopathic dose. Twenty loads per acre, of thirty bushels per load, spread on land, add one load to eight square rods, or two and one-half quarts to each square yard. How many such top-dressings would add to the turf one-half or even one-fourth of an inch, any one curious at figures can determine. The fact that such an application results in an increase of grass, shows that success is due not so much to the quantity as to the action which it generates in the soil. Should this same amount be mixed with the soil by proper cultivation, still greater success might be predicated, for there is added all the advantages which light, heat, frost and air, also fermentation, modification of soil and a choice of grasses, the result of seeding, which top-dressing does not usually include.

Economy would decide that all the elements of fertility should be used if we would farm profitably. We must not use a part and neglect the rest. The nearer we can make the farm like the garden, the more sure the success, and the greater the profit. And this can be done only by a free use of manure well incorporated with the soil, and thorough after cultivation.

S.

[For the Country Gentleman and Cultivator.]

BUGGY PEAS---Bruchus granarius.

For some time I have been intending to write for the benefit of those who save seed peas. In this country they are invariably spoiled by the bugs—that is, a large portion. Some persons assert that it does not hurt them, and that they come just as well, which induced me to try the experiment of planting six peas in a pot—three perforated ones and three sound ones: the sound ones germinated and grew finely, but the others did not sprout, which proves the injury they receive.

For the last three years I have adopted the plan of sealing them up in bottles, air tight, as soon as they are dry enough, sprinkling a few drops of camphorated spirits among them. On a large scale they could be headed up in casks. In this way I have not lost a single pea. For the first time I noticed last season beans badly perforated with numerous holes, the worms having completely eaten out the interior of the bean. Having neglected to seal up my beans this year, I have lost nearly the whole of them. I enclose you a few, to let you see how they operate, having never heard of beans being effected in this way. It may be new to you.

Mt. Carmel, O. T. V. P.

[For the Country Gentleman and Cultivator.]

SURFACE MANURING.

The common excuse for extremists or enthusiasts in politics, arts, sciences, religion, and in almost everything, is often made, that if some people were not ahead of the times, the world would hardly move at all. To enable a wagon to reach the crest of the hill, it is said to be necessary for the leader horses to go some distance beyond. It is, however, a grave question, whether *all* good progress in the right direction is not rather hindered, by, to use a common expression, "running a thing into the ground"—whether extreme views and carrying an argument, even on a sound view of a question, too far, does not entirely miss of its aim and intention.

I always read with great interest the communications of your very able correspondent, S. Edwards Todd, but a remark of his in the last number of the 'Country Gentleman,' under the head of manuring meadows, rather occasioned surprise.

Assuming the theory and practice of surface fall manuring to be correct, is he *serious* in saying, "I have observed for many years past, that they who spread their manure on the surface in the spring of the year, promote the growth of their neighbor's grass about as much as they do their own?"

It is sometimes said, none but *old farmers* should read agricultural papers. Young ones are apt to be misled. This I have never thought, could apply to the 'Country Gentleman,' which I have always considered at the top of the list, and the most *reliable* of all our agricultural papers. In it the wheat seems carefully winnowed from the chaff, so as to make it an almost indispensable vademecum to every progressive farmer, whether young or old.

Probably all can agree with the spirit of S. E. Todd's article, of the great advantages of fall manuring, but with such an *extent* of atmosphere as we have in *this country*, is it possible that the waste of gases from spring manuring can increase the fertility of adjoining farms?

Philadelphia, Pa. PASCHALL MORRIS.

DWARF PLUM TREE.

The annexed cut is hardly a fair representation of a handsome pyramidal plum tree in full bearing. Such a tree, loaded with large beautiful specimens, of such showy sorts as Pond's Seedling, (English,) Bradshaw, and Sharp's Emperor, are well worthy of being looked upon! Ellwanger & Barry's grounds at Rochester have furnished the finest specimens of this sort to be found in the country.

Dwarf Plums are raised by budding on the wild or Canada plum. They will grow eight to ten feet high in well trained pyramids.

Dwarf Plum.

Wire for Garden Purposes.—The Agriculturist says, "lead is much used in England for tying up fruit trees and vines to stakes and trellises, also for attaching labels to stakes. It is soft, flexible, durable, and less hurtful to plants than copper wire. It is made of lead and an alloy mixed with it. For the coarser uses of gardening, especially where much strength is required, this is undoubtedly a good thing. Yet for common, every-day work, such as tying plants to stakes, etc., we much prefer the old bass matting. This is cheaper, more easily handled, and sufficiently durable."—*Maine Farmer.*

Now is the proper time to cover up anything you have any doubts about being hardy enough to stand the winter. A little protection of leaves or loose, littery manure, will hurt nothing, however hardy, while it will save plants quite green that would otherwise badly brown or completely die out.

[For the Country Gentleman and Cultivator.]

ON WINTERING BEES.

In patent hives turn over the draws so as to prevent the entrance of the bees, or their breath, in September or fore part of October. When cold weather commences, suspend the bottom board half an inch, and open the ventilator, so that the watery substance which is caused by the breath and other exhalations of the bees, and collects in the drawer in cold weather may be kept out of them; because frost forms in them, and runs down through the apertures on to the bees as often as it melts, and makes the bees damp, and the combs mould; besides this vapor penetrates and fills the timber, (drawers and chamber,) and causes a disagreeable smell the following season.

There are three principal causes of death among bees in the winter, to wit: want of honey, (not bread, for they never eat it, except when in the larvæ state;) want of air, and freezing. Bees sometimes die of starvation with plenty of of honey in the hive at the same time. In cold weather they crowd together in a small compass, in order to keep warm, and then their breath and vapor collects in frost in all parts of the hive, except in the region they occupy. Now unless the weather moderates so as to thaw the ice, the bees will be compelled to remain where they are located until their stores are all consumed that are within their reach. One winter we had cold weather for ninety-four days in succession, during which time the bees could not move from one part of the hive to another. I examined all my hives on the eighty-third day; and on the ninetieth day I found four swarms dead. I immediately examined for the cause, which was as already stated. I then carried all my hives into a warm room, and thawed them so that the bees could move.

Too much swarming frequently occasions the loss of the old stock in the winter following, because their companions are so reduced in numbers that the necessary animal heat cannot be kept up in the hive to prevent them from perishing by cold. All such stocks should be stored in a dry cellar, or some warm room where they can be kept comfortable during cold weather.

It is believed that bees may be kept through the winter without losing them, if the apiarian is attentive to their wants. If destitute of honey, he will feed them—if suffering for want of air, (which is the most frequent cause of death,) he will ventilate them—if freezing, he will thaw them out—in short, if they are apparently dead, he will resuscitate and bring them to life and activity, which may be done in all cases except when smothered, if attended to in season. In

February, 1857, I had a swarm that were starved by design. I resuscitated them three times without feeding, in three successive days, before life was extinct. The life of bees many times is in a state of suspension considerable time before their death, and may be resuscitated by human aid when otherwise life would become extinct. I have resuscitated them separately under various circumstances for myself and neighbors. Some of the best stock I now own were once apparently dead. A screen bottom board should be used, so as to let up the warm air into the hive, and at the same time enable the apiarian to control and keep the bees in the hive during the process of resuscitation. The feeder should be used in every case to give the bees exercise, and restore activity.

A cellar made in the side of a dry hill, so covered as to keep out water, is a good place for wintering bees. There should be two ventilators at the two most extreme parts of the cellar—one near the bottom and on its side to admit pure air—the other through the top or covering, to let the bad air escape.

Apiarians observing the above rules, will find themselves well paid for so doing.

Lansingville, N. Y. DANA FLETCHER.

AMERICAN CHEESE IN EUROPE.

The last Part of the Journal of the Royal Ag. Society of England, has a very interesting chapter "On the Composition of Cheese, and on Practical Mistakes in Cheese-making. By Dr. AUGUSTUS VOELCKER." We propose to transfer a considerable portion of this essay to our pages, believing it may be read with great profit by our more intelligent and inquiring cheese-makers. But for this week we only copy the Doctor's brief allusion to American Cheese:

Of late years a good deal of cheese has been imported into England from America, some of which is by no means bad; indeed, one or two specimens which came under my notice were excellent in quality. The majority, however, are inferior, and are sold at a low price, being generally badly made and deficient in flavor.

The following table gives the composition of American cheeses:

	No. 1.	No. 2.	No. 3.	No. 4.
Water,	27.29	33 04	31.01	38.24
Butter,	35.41	33.38	30.90	26.05
*Casein,	25.87	27.37	26.25	26.81
Milk-sugar, lactic acid, and extractive matters,	6.21	2.82	7.43	3.64
†Mineral matters (ash),	5.22	3.39	4.41	5.26
	100.00	100.00	100.00	100.00
*Containing nitrogen,	4.14	4.38	4.20	4.29
†Containing common salt,	1.97	.47	1.59	1.94

No. 1 was as nice a cheese as could be desired; in flavor it much resembled good Cheddar, and was found to contain even a higher proportion of butter and rather less water than good Cheddar.

The second cheese, though rich in butter, was retailed at 7*d.* per lb., and the third at 6*d.* per lb. Both were deficient in flavor and badly made.

The fourth chesse was the worst of the four, and had to be sold at 5*d.* per lb. It was full of holes, badly made, and had a very strong smell. It was evident that the whey was not carefully pressed out in the making.

The examination of these and other American cheeses leads me to the conclusion, judging from our imports, that good materials are even more thoroughly spoiled on the other side of the Atlantic than in England.

[For the Country Gentleman and Cultivator.]

Grape-Growing on the Borders of Lake Erie.

It is probably known to many that we have a soil and climate well adapted to the grape, along the south shore of Lake Erie. I will give briefly my experience for 1862. My vines were protected last winter with hemlock boughs, and a few covered with earth. The winter was mild, and it was not needed, but it may be this.

Isabella loaded with fruit, but mildew destroyed nearly all. Catawba, very little mildew—ripened well, a fair crop. Concord, first-rate every way; but one row, near my Isabellas, had some mildew; but the fruit will burst its skin some in ripening. Delaware all right; grows well, and one vine three years old gave 14 pounds of luscious fruit. Diana almost as good as to quality, but the vine is rather tender. Clinton, good. Rebecca, fine quality. Hartford Prolific, early and healthy. Perkins, To-Kalon, and a dozen more on trial, but Concord, Delaware, Diana, Hartford Prolific, and Catawba, most reliable thus far.

My soil is gravel and loam, and I think my grapes are benefitted in quality by the use of fresh water marl, which has a large per cent. of carbonate of lime. The cultivation of the vine is doubtless destined to take a prominent place in this region, and in various parts of our (now afflicted) country, and it is hoped all who can, will give us light, as we at the best have to feel our way.

Fredonia, N. Y. A. S. MOSS.

THE COUNTRY GENTLEMAN.

MESSRS. EDITORS—Inclosed I send $2 for another copy of the COUNTRY GENTLEMAN, for one of my neighbors, to whom I have occasionally loaned it, for perusal; he has found that he loses more by not having it regularly, than the amount of subscription, and desired me to order it for him. It is gratifying to observe the effect produced by introducing such a paper to those who were not accustomed to reading it. There seems to be new life and vigor infused throughout the whole department of Household Affairs, the Yard, the Garden and Field operations are so fully treated upon; the Grazier and Breeder's department giving every desirable information in reference to the proper management of Horses, Cattle, Sheep and Swine, Poultry, Bees and Rabbits; and in fact every living thing either in animal or vegetable kingdom, properly belonging to the farm, receives a full share of attention among the great amount of information collected from such extensive resources, and concentrated in the COUNTRY GENTLEMAN.

There are but few persons residing in the country, however well they may be acquainted with the practical operations of agriculture, that would not derive benefit from its influence. The small amount required to "fix up" one's home and give it a neat and genteel appearance, when reminded of and told how to do it, through the columns of a weekly journal, is so very trifling, compared with the great satisfaction of having a comfortable residence made cheerful in its appearance for the enjoyment of the family, and inviting to social visitors, that any one of taste must feel thankful for the suggestion.

We had a severe snow storm commencing yesterday morning and continuing all day, blowing hard from the north, and freezing some; the snow is now several inches deep, being the first this season. Farmers were not quite ready for cold weather, corn, apples and other crops to gather, fodder and fuel to be stored, and other preparations to make for winter; but this will be a sufficient warning, that when it moderates again there will be no time for delay. WILLIAM PARRY.

Cinnaminson, N. J., 11 mo., 8th, 1862.

[We publish but few of the letters we receive in commendation of the COUNTRY GENTLEMAN, but where they are accompanied by practical evidences of sincerity in the form of frequent efforts to extend its circulation, we do not feel at liberty to withhold the testimony they afford to the real value and usefulness of this Journal.]

GRUB IN THE HEAD OF SHEEP.—Dr. Dadd, in a communication to the Prairie Farmer, says the only way to prevent grub in the head of sheep, is to put plenty of wholesome "grub" into the stomach of the animal—and that it is a well known fact, that sheep properly attended to, *well fed* and housed, are never troubled with the parasite known as the grub.

1863 THE ILLUSTRATED ANNUAL 1863
REGISTER OF RURAL AFFAIRS.

NO. IX---FOR 1863.

The publication of the NINTH NUMBER of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1863, has been somewhat detained for the completion of a very full and valuable Treatise on Entomology, including those Insects about which there is now the greatest desire for general information, from the accomplished pen of the late Entomologist, Dr. ASA FITCH. The importance of the article will be found a full recompense for the delay involved. The ANNUAL REGISTER can now be supplied—all standing orders having been already filled—in any desired quantity, at the following rates:

Single Copies Twenty-Five Cents.

FIVE COPIES,	One Dollar
TWELVE COPIES,	Two Dollars.
FIFTY COPIES,	Eight Dollars.
ONE HUNDRED COPIES,	Fifteen Dollars.

And at these prices the ANNUAL REGISTER will be delivered, either by mail or otherwise, free of charge, to any part of the country. If purchased at the office in any quantity over one dozen, a reduction will be made equivalent to cost of transportation. For still larger quantities for sale by agents, more favorable terms will be given. ALL ORDERS to be accompanied by CASH.

One Hundred and Thirty Engravings!

Among other chapters the ANNUAL REGISTER contains the following, largely illustrated in several instances with new and expensive Engravings:

I. FARMING MADE PROFITABLE—FIVE ENGRAVINGS.
1. Instances of Profitable Farming.
2. Estimate for a Farm of One Hundred Acres.
3. Causes of Disaster.
4. Remedies and Requisites.

II. MANUFACTURE OF MAPLE SUGAR—SEVEN ENGRAVINGS.
1. Sap Boilers.
2. Evaporators.
3. Processes of Collecting and Boiling the Sap.

III. BEST WAY TO BUILD A HOUSE—FORTY-EIGHT ENGRAVINGS.
1. Introduction.
2. Carpenter's and Mason's Specifications.
3. Illustrated Glossary of Architectural Terms.

IV. THE DAIRY—SEVEN ENGRAVINGS.
1. Hints on Butter Making.
2. Rules for Making Cheese.
3. Rules for Management of Cows.

V. RURAL ECONOMY—SIX ENGRAVINGS.
1. Suggestions for Winter.
2. Screwing on Nuts—Leaky Roofs—Horse Fork—Painting.
3. To Avoid Running out of Hay.
4. Highways—Lightning Rods—Osier for Bands—Tape Line in the Cornfield.
5. Forest Leaves for Litter—Good Smoke House—Corn Marker—Scalding Tub—Harvesting Peas.
6. Chain Pumps—Irrigation—Draining—Clean Land.

VI. FRUITS AND FRUIT CULTURE—FOURTEEN ENGRAVINGS.
1. Autumn and Spring Transplanting.
2. Dwarf Apples.
3. Rules for Tree Planters.
4. Systematic Formation of Pyramids.
5. Two Native Plums.
6. Sending Buds by Mail.
7. Shortening in the Peach.
8. Construction of a Cheap Grapery.
9. Gooseberries.
10. Time for Pruning Orchards.
11. Fruit versus Malaria.
12. Dwarf Cherries.
13. Strawberries—Quick Returns.
14. Pruning the Quince.
15. Select Lists of Apples.
16. Labels for Fruit Trees.
17. Select List of Grapes.

VII. INSECTS BY DR. ASA FITCH—THIRTY-FOUR ENGRAVINGS.
1. Definitions of Terms, &c.
2. Descriptions of Orders.
3. Insects which Injure Fruit Trees.
4. Insects which Injure Grain Crops.
5. Insects Injurious to Gardens.

*** To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen Injurious to Grain, and Six Injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HAND BOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

VIII. NOTES ON NEW AND DESIRABLE FLOWERS—TEN ENGRAVINGS.
1. Double Zinnia.
2. Japan Pinks.
3. Bidens Atrosanguinea.
4. Cuphea Limapani—The Striped French Marigold.
5. Dwarf Nasturtium—New Sweet Williams.
6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Gazania.
7. Lychnis Haageana—Whittavia Grandiflora.
8. Calleopsis Cardaminifolia—The Gaillardias.

*** This article was written for the ANNUAL REGISTER with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

IX. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers.

LUTHER TUCKER & SON,
Nov. 20, 1862. ALBANY, N. Y.

BOARDMAN & GRAY'S
PATENT IMPROVED
INSULATED IRON RIM AND FRAME
PIANO FORTES,
MANUFACTURED BY
WILLIAM McCAMMON,
(Successor to BOARDMAN, GRAY & Co.,)
Albany, N. Y.
☞ Send for illustrated price list. Nov. 27—w&mtf.

FARM TO LET—From first day of March next, with a
DAIRY OF FORTY OR FIFTY COWS,
at the election of the tenant for a long term of years, at a stipulated rent, situated in the Mohawk valley, on the line of the Central road, three miles east of Fonda. It has between fifty and sixty acres of interval and superior upland with a never failing supply of water, a durable strength running through the entire length of it, and is in a high state of productiveness. There has been a dairy upon it for the last 17 years. The farm-house is large and commodious, finished throughout, having an excellent cellar and cistern. There is also a large vegetable garden and fine, spacious door-yard sloping to the road. The dairy room is furnished with running water, good cheese press and O. NEIL'S approved Whey Vat for 50 cows. Hog pen for 40 hogs, and every convenience that can reasonably be desired. A yoke of cattle, or pair of draft horses, or both, with farming utensils, and among them a fine section cast-iron roller could be had with the farm if wished. None need apply unless every way competent and responsible, and possessing a good moral character. Address the subscriber ALFRED DE GRAFF, Fonda, N. Y.
Nov. 27—w&m3mos.

THE ADIRONDAC GRAPE.—
THE EARLIEST AND
BEST GRAPE KNOWN,
ripening two weeks earlier than any other good Grape. Possessing a most delicious flavor—in fact, equal to the most delicate hot-house Grape. It originated at the base of the Adirondac range of mountains, on the shore of Lake Champlain. It is believed to possess all the requisites to establish its character as the
Earliest and Best Native Grape.
PRICE—Good 1-year old vines, $3; a limited number of 2-year old vines, at $5; all cut back to three or four eyes. Single vines may be forwarded to any point in the United States at one cent per ounce—larger packages by Express. Address, with remittance,
JOHN W. BAILEY,
Oct. 16—w8tm2t. Plattsburgh, Clinton Co., N. Y.

SHORT-HORNS AND ALDERNEYS
FOR SALE.
The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

PREMIUM CHESTER COUNTY WHITES.—
THOMAS WOOD continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. Address PENNINGTONVILLE, Chester Co., Pa.
April 3—w1y—June 1—m1y.

ALDERNEY COWS,
HEIFERS AND BULLS,
For sale by ROBERT L. MAITLAND,
July 31—w&m1yr. New-York City.

THE NEW-YORK OBSERVER
IS A RELIGIOUS AND SECULAR
NEWSPAPER.

PUBLISHED ON A DOUBLE SHEET, SO AS TO BE EASILY SEPARATED INTO

TWO DISTINCT PAPERS.

In Religion it is free from sectarianism, and gives a full, fair and impartial report every week of all matters of general interest

IN ALL THE DENOMINATIONS.

In Politics it is entirely free from party relations or affinities, discussing great principles with freedom and candor, and giving the fullest and latest intelligence of all the movements of the day.

IT SUPPORTS THE GOVERNMENT WITH VIGOR, FIDELITY AND ZEAL IN ITS EFFORTS TO CRUSH THE REBELLION and restore the Union and preserve the Constitution. It criticises with freedom whatever measures are not adapted to the accomplishment of these ends; but its steady purpose from the beginning of the war has been, and will be, to uphold the hands and strengthen the heart of the Government while it puts forth its energies to protect us against the most unholy rebellion that ever disturbed the peace of any country.

The N. Y. Observer is the most complete family newspaper

IN THE WORLD.

In the variety of its Departments.
In the fullness of its Information.
In the extent of its Correspondence.
In the number of minds enlisted in its Editorial and other columns.
In the amount of money expended in procuring materials to enrich and adorn its pages.
In the healthful, religious, conservative, genial tone that pervades the paper.
In its stores of anecdote, biography, poetry, science, art, and general literature, it will strive to exceed every other weekly newspaper.

GREAT INDUCEMENTS.

The Proprietors of the New-York Observer offer the following valuable premiums for

NEW SUBSCRIBERS.

IN ALL CASES the NEW SUBSCRIBERS **must be those who have not in their own or other's names taken the paper during the past year.**

To Ministers and Others.

The Annals of the American Pulpit, by Rev. William B. Sprague, D. D., are comprised in seven large octavo volumes, viz.:

Congregational,	2	volumes,
Presbyterian,	2	do.
Methodist,	1	do.
Episcopal,	1	do.
Baptist,	1	do.

They contain the biography of more than a thousand ministers, and a history of each denomination, with a statement of its doctrinal views, making a complete library of religious biography and history. The lives of these ministers are interspersed with memorable anecdotes and incidents, and illustrated by letters from distinguished statesmen and clergymen, rendering the volumes an inexhaustible source of instruction and entertainment.

The publishers' price for the seven volumes is $18.50. We will furnish the whole set to the order of any person who will send us TWELVE NEW subscribers with the payment for one year, or any two volumes for four new subscribers, or any one volume for two new subscribers. In all cases the money ($2.50 for each subscriber) must be paid in advance.

To Farmers and Others.

We will furnish the whole set of the following works to any one who will send us FIFTEEN new subscribers—with payment of $2.50 in advance on each for one year—viz:

American Farmer's Encyclopedia,	$4.00
Allen's (R. L.) American Farm Book,	1.00
Allen (J. Fisk) on the Culture of the Grape,	1.00
Barry's Fruit Garden,	1.25
Boussingault's Rural Economy,	1.25
Bridgeman's Young Gardener's Assistant,	1.50
Buist's American Flower Garden Directory,	1.25
Comprehensive Farm Record,	3.00
Dadd's Modern Horse Doctor,	1.00
Dadd's American Cattle Doctor,	1.00
Dana's Muck Manual,	1.00
French's Farm Drainage,	1.00
Garlick's Fish Culture,	1.00
Herbert's Hints to Horse-Keepers,	1.25
Warder's Hedges and Evergreens,	1.00

To any one sending us ten new subscribers and advance payment for each, one year, we will send the Farmer's Encyclopedia, Farm Record, and any five other books on the list—or the entire list, except the Encyclopedia and Record.

For five new subscribers, with payment in advance, we will send the Farmer's Encyclopedia and Farm Record, or any other five books in the list.

For four new subscribers and payment, the Encyclopedia and any book less than $3.

For three new subscribers, the Farm Record and any dollar book.

For two new subscribers, any two books in the list costing less than $3 each. And for one new subscriber any book costing less than $3 on the list.

These books will be sent by mail or express, at the option or expense of the subscribers.

Every evening devoted to canvassing may secure one or more of these volumes.

They are among the most practical works now published on the subjects treated. With this collection of books in his library, neither the beginner nor the more advanced farmer need go further for the instruction desired in any branch of his pursuit.

They are here placed within the reach of EVERY YOUNG MAN IN THE COUNTRY, WITHOUT A DOLLAR IN MONEY.

Specimen copies of the paper sent free to any address.

SIDNEY E. MORSE, Jr., & CO.,
Editors and Proprietors,
Nov. 6—w6tm1t. 37 Park Row, New-York.

SIX HUNDRED THOUSAND
MALE OR FEMALE AGENTS TO SELL
LLOYD'S NEW STEEL PLATE COUNTY COLORED
MAP OF THE UNITED STATES,
CANADAS & NEW-BRUNSWICK,

From recent surveys, completed August 10, 1862; cost $20,000 to engrave it and one year's time.

Superior to any $10 map ever made by Colton or Mitchell, and sells at the low price of fifty cents; 370,000 names are engraved on this map.

It is not only a County Map, but it is also a

County and Railroad Map

of the United States and Canadas combineded in one, giving EVERY RAILROAD STATION, and distances between them.

Guarantee any women or man $3 to $5 per day, and will take back all maps that cannot be sold and refund the money.

Send for $1 worth to try.

Printed instructions how to canvass well, furnished all our agents.

WANTED.—Wholesale agents for our Maps in every State, California, Canada, England, France and Cuba. A fortune may be made with a few hundred dollars capital. NO COMPETITION.

J. T. LLOYD, No. 164 Broadway, New-York.

The War Department uses our Map of Virginia, Maryland, and Pennsylvania, cost $100,000, on which is marked Antietam Creek, Sharpsburgh, Maryland Hights, Williamsport Ferry, Rhorersville, Noland's Ford, and all others on the Potomac, and every other place in Maryland, Virginia, and Pennsylvania, or money refunded.

LLOYD'S TOPOGRAPHICAL MAP
OF KENTUCKY, OHIO, INDIANA AND ILLINOIS,

is the only authority for General Buell and the War Department. Money refunded to any one finding an error in it. Price 50 cents.

[From the Tribune, Aug. 2.]

"LLOYD'S MAP OF VIRGINIA, MARYLAND AND PENNSYLVANIA.—This Map is very large; its cost is but 25 cents, and IT IS THE BEST WHICH CAN BE PURCHASED."

LLOYD'S GREAT MAP OP THE MISSISSIPPI RIVER.—From Actual Surveys by Captains Bart and Wm. Bowen, Mississippi River Pilots, of St. Louis, Mo., shows every man's plantation and owner's name from St. Louis to the Gulf of Mexico—1,350 miles—every sandbar, island, town, landing, and all places 20 miles back from the river—colored in counties and States. Price, $1 in sheets; $2 pocke form, and $2.50 on linen with rollers. Ready Sept. 20.

NAVY DEPARTMENT, WASHINGTON, Sept. 17, 1862.

J. T. LLOYD—Sir: Send me your Map of the Mississippi River with price per hundred copes. Rear-Admiral Charles H. Davis, commanding the Mississippi squadron, is authorized to purchase as many as are required for the use of that squadron.

Oct. 9—w3t—m3t. GIDEON WELLES, Secretary of the Navy.

NEW-YORK STATE TILE WORKS
Near the Corner of Lark & Lydius-Sts.,
Albany, N. Y.,
WM. M. BENDER, Proprietor.
GEO. JACKSON, Superintendent.

The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

N. B.—Drainage to any extent and at any place done by contract and tile furnished for the same. Ap 10—w—Jy 1—m1yr.

Also DRAINING TILE MACHINES for sale, of the latest improved PATTERNS. For further particulars address as above.

Whatever other Agricultural Journals the Farmer may take, the Cheapness and Value of The Cultivator render it indispensable.

THE CULTIVATOR FOR 1863.

This Periodical enters upon its thirtieth year, with 1863. It is now made up from the COUNTRY GENTLEMAN—those articles being particularly selected which shall present in each number the greatest variety of brief practical hints and suggestions, calculated to be of the widest interest and most general utility. It has long been the belief of the Editors that what one farmer has done another can do—hence their aim is to transcribe, either themselves or through their correspondents, the exact systems which the best and most successful of our farmers are now practically following, by which they have made money and enriched their soils—to explain the modus operandi, and set others in the way of following the example. We may assert without exaggeration, that it contains scarcely a page, from January to December, on which may not be found some Fact from the Actual Practice of the writer, of far greater real value to the careful reader than the year's subscription.

THE CULTIVATOR has always been FAR LARGER—containing from one to two-thirds more matter—than any contemporary published at the same price. While other papers have advanced their rates, or have been discontinued, we propose to CONTINUE THE CULTIVATOR FOR 1863 ON THE SAME TERMS as heretofore, and it is now not only, as it has always been, THE CHEAPEST, but also, we believe, THE ONLY Agricultural paper published in the United States whose single copy price is FIFTY CENTS A YEAR.

THE CULTIVATOR

Is published monthly, all subscriptions beginning with the January number, and forms an annual volume of nearly 400 large 8vo. pages.

Single Copies 50 Cents per Annum,

Payment strictly in advance. Clubs are presented with the ANNUAL REGISTER OF RURAL AFFAIRS, containing 144 Pages, and 150 Engravings, and thus obtain

528 Pages Reading Matter, and more than 200 Engravings, for Fifty Cents.

WHAT EVERY BODY WANTS!!

We have secured what we consider the BEST WAR MAP of the whole Fifteen Southern and Border States, colored and engraved on steel, covering a surface of about FIFTEEN SQUARE FEET, revised and corrected to the latest dates, which we are enabled to CLUB WITH THE CULTIVATOR AND REGISTER on the very favorable terms given below. Such a Map, previous to the late advances in the art of printing, could not have been purchased for less than TEN DOLLARS; but under the following proposition, our subscribers will receive it at a cost of

ONLY FIFTEEN CENTS!!

In other words, Ten Copies of THE CULTIVATOR and REGISTER, with TEN MAPS, (and one of each free to the sender of the Club) will be sent for $6.50, and the following will be the

TERMS FOR 1863.

Single Copy of THE CULTIVATOR for 1863,	$0.50
do. do. and ANNUAL REGISTER,	0.75
do. do. do. and WAR MAP,	1.00
Ten Copies of THE CULTIVATOR, and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS,	5.00
Ten Copies of THE CULTIVATOR and REGISTER, with ten copies of the War Map, WITH ONE COPY OF EACH OF THE THREE FREE TO THE SENDER OF THE CLUB,	6.50

Or, if only a part of the Club desire to receive the Map, each one wishing it may make his payment 65 cents, instead of 50 cents, and we will send them in any required number, BUT ONLY TO THOSE WHO ARE SUBSCRIBERS, at this rate.

THE COUNTRY GENTLEMAN.

THE COUNTRY GENTLEMAN contains sixteen large pages every week, and forms two volumes per year of 416 pages each—subscription $2 per year, or $2.50 if not paid strictly in advance. The volumes begin with January and July.

FIVE DOLLARS will pay for Six Copies of THE CULTIVATOR and One Copy of the COUNTRY GENTLEMAN for 1863, with a copy of the ANNUAL REGISTER to each of the Seven Subscribers. SIX DOLLARS will also entitle each of the Seven to a copy of the WAR MAP.

Specimen copies and Prospectuses of the COUNTRY GENTLEMAN and the CULTIVATOR will be sent to all who desire them, and Postmasters, and all persons interested in Rural pursuits, are earnestly invited to act as Agents.

Address letters of inquiry, or orders accompanied with the cash, to

LUTHER TUCKER & SON, Albany, N. Y.

FARM FOR SALE.—The late D. SIMMONS farm, containing 265 acres, situated nine miles from Albany, four miles from Troy, one and a half miles from Cohoes, and one-half mile from New-York Central Railroad. It has on it

THREE FINE DWELLINGS,

a large number of BARNS and OUT-HOUSES; a great quantity of FRUIT TREES, of different varieties—is well UNDERDRAINED, and equally divided by a road leading from Cohoes. Price per acre, $125.

Immediate possession can be given.

For further particulars enquire of JONAS SIMMONS,
Nov. 27—w4tm2t.* Cohoes, N. Y.

BERKSHIRES FOR SALE, AT EDWARD WAIT'S, Walden, Orange Co., N. Y.,

One very choice Berkshire Boar, 2 years old; Nos. 1, 2 or 3 choice pair of Pigs, selected from three litters, and suitable for breeding.
Nov. 20—w&m1t.

GARDENER WANTED.—An unmarried man, competent to raise Vegetables and Fruits for market, may find a good situation in western Massachusetts. If he can also do farm work, and can manufacture rustic garden furniture, he can have employment through the year. Address W. H. P., at this office.
Oct. 30—w1tm1t.

ALDERNEY BULL, WASHINGTON,

one year old Feb. 22, 1861, full and pure blood, for sale, cheap. Enquire of NEWTON REED,
Oct. 30—w&m1t.* Amenia Union, Duchess Co., N. Y.

BERKSHIRE PIGS—STRICTLY PURE,

from different families, at low rates.
Oct, 9—w4t—m2t. WILLIAM J. PETTEE, Lakeville, Conn.

THE FARMER'S LIBRARY

We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 9th vol. of which is now completed. The price of the Nine volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 9, can be had separately at the same price. The Nine volumes will be sent per Express to any part of the country, on receipt of $6 75.

THE HORSE AND HIS DISEASES.

Embracing his history and varieties, breeding and management, and vices; with the diseases to which he is subject, and the remedies best adapted to their cure. By Robert Jennings, V. S. To which are added Rarey's method of taming horses, and the law of warranty as applicable to the purchase and sale of the animal. Illustrated by nearly 100 engravings. Price $1.25 by mail, postpaid. For sale by

LUTHER TUCKER & SON, Co. Gent. Office, Albany, N. Y.

THE YOUNG FARMER'S MANUAL—With Practical Directions for Laying Out a Farm and Erecting Buildings, Fences, and Farm Gates. Embracing also the Young Farmer's Workshop: giving full directions for the selection of good Farm and Shop Tools, their Use and Manufacture, with numerous Original Illustrations of Fences, Gates, Tools, etc., and for performing nearly every branch of farming operations. By S. EDWARDS TODD. Price $1.25, by mail post paid. For sale by L. TUCKER & SON, Co. Gent. Office, Albany, N. Y.

Just Published, One vol. 12 mo.—$1.25.

MILCH COWS AND DAIRY FARMING; Comprising the Breeds, Breeding, and Management in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese; embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying yet issued upon the subject—is for sale at the office of this paper.

Albany, Jan. 1—w&mtf. L. TUCKER & SON.

BEES AND BEE KEEPING—A Plain, Practical Work, with directions how to make Bee-Keeping a Desirable and Lucrative Business, and for Shipping Bees to California. By W. C. HARBISON. Price $1, by mail post paid. For sale by L. TUCKER & SON, Co. Gent. Office, Albany, N. Y